# Student Aid Policy of Chinese Higher Education

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# Abstract

Student aid policy of Chinese higher education was made in the form of free higher education before 1989. It changed into the form of direct assisting and rewarding students afterwards with the cost sharing policy into operation in China.

This paper analyses four main questions of Chinese student aid policy. Firstly, it explores the background in which the policy is formulated and identifies the policy development stages. Secondly, human capital theory and modernization theory are applied to rationale the policy and specific goals of the policy are identified. Thirdly, some challenges confronting the policy are analyzed. Finally the impacts of the policies are explored.

Domestic-study student aid and study-abroad student aid are two types of student aids of Chinese higher education. Assisting poverty students to improve equality and training human capital to increase efficiency are two rationales for Chinese student aid policy.

Student aid policies have made great impacts on many aspects of China as expected. The equality of Chinese higher education is improved. The quality of higher education is enhanced through training excellence students and training more excellent teachers. Furthermore, the science and technology creativity of China is enhanced accordingly with the development of Chinese higher education. At the same time the balance between rural and urban and balance between western and eastern areas are improved.

At the same time, there are still some challenges for this policy. Those challenges are funding sources constraints, coordinating different stakeholders, how to cover under represented students, and how to improve brain-brain.

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# 1. Introduction to the Study

## 1.1 Introduction

In the history of world higher education, student aid idea has been in existence since the end of 18th century. At that time, the basic idea of student aid was 'charity and religion'. New idea of student aid was formed by Thomas Jefferson[1] in early 19th century. The main idea was 'equality and national interest'. And then student aid system began to be established and sponsored by governments in America and European countries.

With reestablishment of higher education after the Second World War, the idea of 'Equal opportunity of higher education' was established. And the human capital theory was developed extensively by American economist Gary S. Becker and Theodore Schultz during 1950s & 1960s. With the developments of the idea of equal opportunity of higher education and theory of human capital, generous 'free higher education plus allowance' became the basic student aid model in many countries. Under this policy, the total amount of higher education funding increased at unprecedented speed from then on. But free higher education policy lost its economic root with decrease of higher education funding caused by world economic crisis. Furthermore, it was observed that 'free higher education plus allowance' did not increase relatively the attendance rate in higher education of low- to moderate-income youth. And it was pointed out that private benefits were in excess of public benefits (Psacharopoulos, 1981). Both observations brought up rethinking the idea about equality of higher education. Then, the cost sharing idea was brought up by an American economist in 1986 (Johnstone, 1986). Based on the commonsense on the high economic and non economic benefits for the students and the equity principle that who benefit who pay, the traditional free higher education policy were changed to cost sharing funding policy of higher education in most countries. Students began to be charged for tuition, cost fees for boarding and other additional fees under cost sharing policy. Almost all countries have developed new student aid policy to offset the poverty student problems with operation of

[1] Thomas Jefferson (13 April 1743 – 4 July 1826) was the third President of the United States (1801–1809), the principal author of the Declaration of Independence (1776)

cost sharing policy. Furthermore many countries established other students aid to serve for other public benefits.

From above we can see that equality, human capital theory and cost sharing are the underpinning theories for the development of student aid policy.

## 1.2 Research Problem and Questions

Student aid policy of Chinese higher education was made in the form of free higher education before 1989. It changed into the form of direct student aid with the cost sharing policy into operation in China. With massificaiton of higher education, increasing tuition fees and intensified internationalization, student aid issue becomes more important than ever in China. To cover more students, to make higher education more equitable, to provide more skilful and advanced human capital to Chinese society and economy, China has developed two categories of student aid in Chinese higher education: domestic-study student aid and study-abroad student aid.

There have been many studies on how to improve student aids policies, some of which comparing those policies between China and foreign developed countries. But there are little systematic research on the rationales, goals, challenges and impacts of those policies.

To study the rationales and goals of those policies and the impacts of those polices, this paper explores the following four questions:

- How has student aid policy of Chinese higher education developed?
- What are the rationales and goals of student aid policy of Chinese higher education?
- What are the main challenges confronting student aid policy of Chinese higher education?
- What are the impacts of student aid policy of Chinese higher education?

## 1.3 Research Method

This paper is both a qualitative and quantitative research. Broadly speaking, qualitative research is a general category that refers to a number of different orientations used to describe and interpret processes occurring within natural and everyday settings (Ritchie& Spencer, 1994)**.** This paper mainly focus on how and what questions regarding to Chinese student aid policy. At the same time some quantitative methods are used to show the changes and the trends. Analysis of documents is one of the qualitative research methods. The term 'document' covers a very wide range of different kinds of source, including personal documents, official documents, mass media output, internet resources. This paper use mainly official documents and part of internet resources. There are three approaches to the analysis of documents: qualitative content analysis, semiotics and hermeneutics. Qualitative content analysis is the most common approach of them. This paper uses this approach. Qualitative content analysis is an approach to the analysis of documents and texts to search out underlying themes in the materials being analyzed (Bryman, 2004)

In very broad terms, quantitative research is described as entailing the collection of numerical data and as exhibiting a view of the relationship between theory and research as having an objectivist conception of social reality (Bryman, 2004). In this paper, the quantitative research method is secondary analysis of data collected by other researchers and by government departments.

## 1.4 Source of Information

Based on the research method, the main sources of information are as follows:

1. Official year books and year reports: this paper uses the statistical year books, financial year books and education year books and reports

2. Official policy documents: this paper uses the official policy documents issued by Ministry of Education, Ministry of Finance.

3. Ministry official websites: Due to the difficulties to find the hard copies of year books, reports and policy documents, this paper uses the official websites of Bureau of Statistics, Ministry of Education and Ministry of Financial as sources of information.

4. Periodicals in higher education field: to search for data that are collected by other researchers as sources of secondary analysis, this paper reviews many key periodicals in the higher education field both in Chinese and English.

# 2. Theoretical Framework

## 2.1 Cost Sharing

### 2.1.1 The Concept of Cost Sharing

Cost sharing in higher education refers to a shift in the burden of higher education costs from being borne exclusively or predominately by government, or taxpayers, to being shared with parents and students (Johnstone, 2003). Those costs may take the form of tuition, cost fees for board, books, and other costs of student living that may formerly have been covered mainly by the government. The costs are shared by four parties: government or taxpayers, parents, students and philanthropists (Johnstone, 2005)

### 2.1.2 The Rationales of Cost Sharing

There are three principle rationales behind cost sharing: efficiency, equity and necessity (Johnstone, 2005). The efficiency rationale assumes a greater efficiency when there is a charge, or a price, that reflects at least some of the real costs and trade-offs involved in a provision of higher education. The equity rationale assumes that higher education everywhere is taken disproportionably by the children of the high income families. This is not only because of their greater purchase power, but because they have the advantages of greater cultural capital from families and the environments around. But the so-called free higher education is borne by all the taxpayers including middle and low income families beside the high income families. Thus the equity rationale believes that middle and low income families (taxpayers) subsidize the students from high income families (taxpayers), which results in redistribution of income and status from the poor and the middle families to the high income families. The necessity rationale assumes that there is a sheer need to find alternative funding of higher education because of competition of public funds among all public sectors and the pressure of tax relief (Johnstone, 2005).

### 2.1.3 Cost Sharing as Policy

Cost sharing is also used to signal a policy-driven shift in the distribution of cost burden. The shift can be introduction of tuition fees to cover part of the costs for instruction and other user charges to cover most of the cost for boarding, food and other activities of student livings. The shift can also be in the direction of increasing of cost-sharing by other parties other than the government. For example, cost sharing policy began with the introduction of tuition fees in 1989 in China. Universities began to charge tuition fees and cost for boarding from part of students at that time. And then the cost sharing policy developed fast in China. The tuition fees increases and all undergraduate students and most master degree students are charged of tuition fees nowadays.

## 2.2 Human Capital Theory

Human capital is an important concept in economics. Adam Smith defined human capital as one type of fixed capital. Smith saw human capital as skills, dexterity (physical, intellectual, psychological, etc) and judgment (Smith, 1776).

The use of human capital in the modern neoclassical economics originated in the late 1950s (Mincer, 1958). Human capital theorists (Schultz, 1961 &Becker, 1964) view humans as economic resources. They treat the labouring ability of human beings much like facilities and natural resources needed for industrial processes. More human capital, in turn, implies higher salaries and a smaller chance of ending up unemployed. Human capital also generates non-monetary benefits related to job satisfaction, personal development, and participation in social life. Human capital can be increased and enhanced by increasing the educational levels of the work force. The rate of return to individuals “investing” in years of schooling as measured was lifetime earnings (Becker, 1964). Students are viewed as resources having future value and as commodities in the labour market. Schools are believed to increase the capacity of humans by increasing their levels of skill and knowledge.

Cost-benefits analysis was used to calculate the ratio of return to investment in human capital and compare the levels of returns:

It is thought that private returns are in excess of public returns, especially at the university levels (Psacharopoulos, 1981). And it is updated as the private rates of returns are higher than social rates of returns (Psacharopoulos, 1994). And lately research shows that the highest social returns from human capital investment are recorded for low-middle income countries (Psacharopoulos & Patrinos, 2002).

Higher education as social investment accelerates economic growth (Mora&Vila, 2003):

According to OECD, the relationship between science, technology and economic performance appears having changed in the 1990s. Innovation is now considered more critical to successes in business and to the growths of economies. Information and communication technologies (ICT) play a critical role in facilitating innovation through the diffusion of technological and organizational developments. Technology and innovation are the main drivers of increased economic growth performances in developed countries. The education of the labour force is at the roots of both technological and organizational developments and the diffusion of innovation through ICT's also relates to the availability of educated workforce.

Countries will inevitably fall behind and experience intellectual and economic marginalization without improved human capital (UNESCO &World Bank, 2000). Governments of most developing countries established student aid systems and policies to support students getting higher education. Those national student aids are also investments in human capital with the aim to enhance abilities of technology creativity demanded by national economic growths. As the highest social returns are recorded for low and middle-income countries (Psacharopoulos & Patrinos, 2002), it makes it necessary for China to invest more in student aid system to obtain technology creativity advantages entailed by high quality human capital.

On-the-job training is kind of human capital investment: (Becker, 1980). Workers and employers can make investments in learning new skills to increase the productivity, i.e. increase the value of human capital. More than half of the students aided by study-abroad student aids are workers in the branches of government and big stated owned enterprises in China. The government and employers cooperate to subsidize workers to study abroad in order to increase the human capital and to get benefits from the increased human capital, such as international customs and experiences of government works and new technologies.

## 2.3 Modernization Theory

### 2.3.1 Western Modernization Theory

Giddens' modernization means the appearance of 'modes of social life or organization which emerged in Europe from about the 17th century onwards and which subsequently became more or less worldwide in their influences (Giddens, 1991).

Levy's definition of modernization emphasizes on the sources of power and the nature of the tools used by members of a given society. It divided all countries into two categories: relatively modernized society and relatively non-modernized society, which constitute a continuum (Levy, 1966). Both definitions view global development in an incremental non-linear continuum and defined modernization as a natural global process with the advanced western world at the farthest point of a continuum that exemplifies the direction for all other developing countries at the opposite end. "Given the contact between countries, there is always possible or easy for some of the late comers to find interest in and understand some of the structures or devices of the former" (Levy, 1966). Those structures and devices can be seen as kind of knowledge. Basic features are transportable and shareable. Knowledge is easily moved and shared. This transfer does not prevent its use by the original holder.

Latecomers are not transformed gradually in long period. Instead, latecomers must rely heavily on borrowing from foreign models and on rapidly adding to or replacing present structure. The sudden transition to modernization has been realized in many countries such as Russia and Japan. There are four critical trends in both of them: (1) increasing control over resources and individuals to enable mobilization of investment in new knowledge and new technology (2) increasing aggregate and per capita production were made possible in part by new technology (3) increasing urbanization, specialization and interdependence within the population (4) the growth of rational, scientific and technical knowledge through the development of communication, system, education institutions and basic research

### 2.3.2 Mr. Deng’s Socialism Modernization

The national goal of China's modernization is to reach the level of the moderately developed countries in the world and basically realize modernization around 2050, and to reach the advanced level in the world and totally realize modernization then.

Firstly, modernization is the main task of China and the main way to resolve the international and domestic problems facing China (Deng, 1993).

Secondly, Chinese style modernization must be established on the Chinese reality and on the condition of socialism to develop Chinese socialism economy (Deng, 1993).

Thirdly, science and technology are the most important factors of productivity, modernization of science and technology are the most important modernization for China besides three other modernizations, i.e. modernization of agriculture, modernization of industry and modernization of national defence (Deng, 1993).

Western modernization theory is almost in line with Deng’s modernization theory. Both theories stress on the importance of science and technology in national development and international competition. Science and technology is the way to resolve the big problems in national, international even global scenarios. At the same time, there are also differences between them. The most important difference is that Deng’s theory is based on Chinese socialism. Socialism is the cornerstone of Deng’s modernization theory. Based on this ground, China can learn modernization experiences and lessons from other developed countries.

Study- abroad is an important way for China to learn from other countries. Returnees from study-abroad form the elite groups of academy and economy in China. About 80% of the higher education rectors, 81% of members of China Academy of Science, 54% of members of China Academy of Engineering and about two thirds of supervisors of doctoral degree students have experiences of study-abroad. They have promoted Chinese academy and economy more internationalized and integrated with other parts of world. They have enhanced the world competitiveness of China.

# 3. The Development of Student Aid Policy

## 3.1 The Funding Policy Reform

### 3.1.1 Limited Public Funding Source

Effectiveness, equity and necessity are three rationales for the cost sharing policy of higher education. In China, necessity is the most important rationale for cost sharing policy. With a limited number of institutions and enrolments based on a planned economy, higher education was almost totally free to all students before 1980s. All students who could pass the national college entrance exam and were enrolled by higher education institutions would be free of tuition for studying years. All students also received governmental subsidies for living expenses. All graduates from higher education institutions were assigned jobs according to the demands of national planed economy. After 1980s, national government funding has failed to meet the increasing demand of higher education. The free higher education model began to be reformed from 1989.

Chinese economy grew very fast in the past 30 years, but national fiscal appropriation did not increase proportionally to the development of economy. From year 1993 to year 1996, the proportion of total fiscal appropriation to GDP decreased from 13.4 to 11.69. From year 1997 this proportion began to increase again. Until 2002 this proportion reached 21.4. The situation seems changing better, but more public sectors supporting economy development competed for fiscal appropriation than before. The proportion of appropriation for education to the total appropriation decreased from year 1998 to 2002. There are still distance between China and other countries regarding to this proportion. The proportion of 3.41 % of year 2002 (see table 1) was far lower than that of OECD countries 5.2%, and average 4.4% of developing countries.

The limited national fiscal appropriation determined that free higher education can not develop fast enough to meet the increasing demand of higher education. It is impossible to shorten the gap between demand and supply of Chinese higher education only by national fiscal appropriation.

**Table 1: Government Expenditure on Education as Share of Relevant Indicators**
Unit: Billion Yuan
Year: 1993-2002

| year | (1) | (2) | (3) | (4) % | (5) % | (6) % |
|---|---|---|---|---|---|---|
| 1993 | 86.776 | 464.230 | 3,463.44 | 13.40 | 18.69 | 2.51 |
| 1994 | 117.474 | 579.262 | 4,675.94 | 12.39 | 20.28 | 2.51 |
| 1995 | 141.152 | 682.372 | 5,847.81 | 11.67 | 20.69 | 2.41 |
| 1996 | 167.170 | 793.755 | 6,788.46 | 11.69 | 21.06 | 2.46 |
| 1997 | 186.254 | 923.356 | 7,446.26 | 12.40 | 20.17 | 2.50 |
| 1998 | 203.245 | 1,079.818 | 7,834.52 | 13.78 | 18.82 | 2.59 |
| 1999 | 228.718 | 1,318.767 | 8,206.75 | 16.07 | 17.34 | 2.79 |
| 2000 | 256.261 | 1,588.650 | 8,946.81 | 17.76 | 16.13 | 2.86 |
| 2001 | 305.701 | 1,890.258 | 9,731.48 | 19.42 | 16.17 | 3.14 |
| 2002 | 357.336 | 2,205.315 | 10,479.06 | 21.04 | 16.20 | 3.41 |

Note: (1) = Education fiscal appropriation (2) = Total fiscal appropriation (3) = GDP
(4)= (2)/ (3) (5) = (1)/ (2) (6) = (1)/ (3)
Source: Ministry of Finance, 2008

In order to alleviate the financial pressure and strengthen institutional autonomy, there was a series of policy reforms on higher education funding from early 1990s. “The Decision of the CCP Central Committee on the Reform of the Education System” was made in year 1985. It pointed out that the higher education institutions were allowed to enrol some self-financed students along with the national enrolment plan of public funded students. The self-financed students need to pay tuition fees. This decision started to be carried out in higher education from year 1989. All undergraduate students and most master degree students have begun to be charged tuition fees since the year 1997.

As Table 2 shows, present Chinese public higher education funding sources include:

(1) National fiscal appropriation
(2) Tax income from local governments
(3) income of university owned enterprises and other income from social service (f. example hospital and kindergarten); appointed fund for paying student work study, and other
(4) Business incomes: tuition fees, cost for boarding and other fees
(5) Donation from private and society
(6) Other sources, for example the interest income

With the establishment of cost sharing policy in Chinese higher education, the ratio of national fiscal appropriation decreased rapidly, from 93.5% in year 1990 to 55% in 2001.

And the ratio of tuition and other fees from students increase from 0.5% of year 1990 to 24.7% of year 2001 (See Table 4).

**Table 2 -Funding Sources of Chinese Public Higher Education Institutions**
Unit: Thousand Yuan
Year: 1990-2001

| Year | Total | Fiscal Appropriation | | | | Business Income | | Donation | Others |
|---|---|---|---|---|---|---|---|---|---|
| | | Total | (1) | (2) | (3) | Total | (4) | (5) | (6) |
| (1)Chinese Public Higher Education Institutions | | | | | | | | | |
| 1990 | 11068529 | 10351608 | 9227703 | | 1123905 | 309525 | 51934 | — | 407391 |
| 1991 | 13136154 | 12210577 | 10426350 | | 1784227 | 508262 | 191522 | — | 417315 |
| 1992 | 16207989 | 14676497 | 12175884 | | 2500613 | 910955 | 458167 | — | 620537 |
| 1993 | 16845910 | 15469498 | 13883465 | 19821 | 1442089 | 1035961 | 1035961 | 124557 | 215894 |
| 1994 | 22142921 | 18194983 | 16069726 | 63597 | 1967144 | 2623078 | 2623078 | 286524 | 1038336 |
| 1995 | 26228865 | 21126599 | 18242838 | 91024 | 2537067 | 3560317 | 3560317 | 421055 | 1120894 |
| 1996 | 31073252 | 24480981 | 21071165 | 291158 | 2714194 | 4476637 | 4476637 | 513991 | 1601943 |
| 1997 | 37558758 | 28678468 | 24406563 | 378319 | 3280783 | 5902682 | 5902682 | 861681 | 2116827 |
| 1998 | 54479928 | 35377140 | 27010199 | 746136 | 1123999 | 14472555 | 7311341 | 1146396 | 3483837 |
| 1999 | 70423300 | 44192163 | 34786707 | 690969 | 1240072 | 21090381 | 12078355 | 1616766 | 3523990 |
| 2000 | 90442715 | 52885626 | 43300774 | 829218 | 1614675 | 31398773 | 19261089 | 1518284 | 4640032 |
| 2001 | 114516898 | 62959242 | 53520011 | 721716 | 1630695 | 43515675 | 28244171 | 1727747 | 6314334 |
| (2)Higher Education Institutions Owned by Central Government | | | | | | | | | |
| 1990 | 5718262 | 5333655 | 4555611 | | 778044 | 177473 | 13974 | | 207134 |
| 1991 | 7004143 | 6495909 | 5270528 | | 1225381 | 231937 | 70440 | | 276297 |
| 1992 | 8773954 | 7976917 | 6294943 | | 1681974 | 387193 | 162417 | | 409844 |
| 1993 | 9325131 | 8768668 | 7576284 | 414 | 1093610 | 398311 | 398311 | 60565 | 97587 |
| 1994 | 11953977 | 10137314 | 8664136 | 6 | 1424811 | 1034220 | 1034220 | 133192 | 649521 |
| 1995 | 13830908 | 11506347 | 9431131 | | 1918503 | 1425372 | 1425372 | 278851 | 620338 |
| 1996 | 16223503 | 13073051 | 10933873 | | 1933824 | 1805357 | 1805357 | 363642 | 981453 |
| 1997 | 19959219 | 15486326 | 12599772 | | 2511622 | 2630294 | 2630294 | 545265 | 1297334 |
| 1998 | 32576606 | 20447796 | 15038112 | 11210 | 799079 | 8752186 | 3392814 | 797083 | 2579541 |
| 1999 | 36153830 | 22558350 | 16976728 | 91260 | 852777 | 10148359 | 3998720 | 1091396 | 2355725 |
| 2000 | 41778738 | 25173520 | 20197649 | 105704 | 1028885 | 12790560 | 5020251 | 1068967 | 2745691 |
| 2001 | 49462142 | 28514755 | 24239416 | 1346 | 894866 | 16522976 | 6639532 | 1117225 | 3307188 |
| (3)Higher Education Institutions Owned by Local Governments | | | | | | | | | |
| 1990 | 5350267 | 5017953 | 4672092 | | 345861 | 132052 | 37960 | | 200262 |
| 1991 | 6132011 | 5714668 | 5155822 | | 558846 | 276325 | 121082 | | 141018 |
| 1992 | 7434035 | 6699580 | 5880941 | | 818639 | 523762 | 295750 | | 210693 |
| 1993 | 7520779 | 6700830 | 6307181 | 19407 | 348479 | 637650 | 637650 | 63992 | 118307 |
| 1994 | 10188944 | 8057669 | 7405590 | 63591 | 542333 | 1588858 | 1588858 | 153332 | 389085 |
| 1995 | 12397957 | 9620252 | 8811707 | 91024 | 618564 | 2134945 | 2134945 | 142204 | 500556 |
| 1996 | 14849749 | 11407630 | 10137292 | 291158 | 780370 | 2671280 | 2671280 | 150349 | 620490 |
| 1997 | 17599539 | 13191242 | 11805891 | 378319 | 769161 | 3272388 | 3272388 | 316416 | 819493 |
| 1998 | 21903322 | 14929344 | 11972087 | 734926 | 324920 | 5720369 | 3918527 | 349313 | 904296 |
| 1999 | 34269470 | 21633813 | 17809979 | 599709 | 387295 | 10942022 | 8079635 | 525370 | 1168265 |
| 2000 | 48663977 | 27712106 | 23103125 | 723514 | 585790 | 18608213 | 14240838 | 449317 | 1894341 |
| 2001 | 65054756 | 34444487 | 29280595 | 720370 | 735829 | 26992701 | 21604639 | 610522 | 3007046 |

Source: Hu & Chen, 2001

### 3.1.2 Increasing Public Demand of Higher Education

Mr. Deng pointed out the increasing demand of higher education by the development of social economy for the first time (State department, 1985).

*"Following the system reform of economy, there is an urgent need for the reform of the system of science and technology and the system of education. Human capital is critical to the success of China. And developing education is the only way to increase human capital."*

With the start of economic reform and open door policy in the late 1980s, the labour market was gradually opened up to more foreign investment companies, joint venture business and private firms. Demand of highly competent human capital of different majors increased very fast. The higher education system, especially the funding system must be reformed to expand capacity much faster and establish new majors to meet the demand of labour market in the new development stage of Chinese economy.

Until the end of the 20$^{th}$ century, The Chinese economy had been much more developed than before the reform. Traditional labour intensive and mass production industries had begun to be replaced by high tech industries. At the same time, there was increasing demand of highly creative human capital by high tech industries.

Furthermore, higher education is not only expected to provide qualified personnel for high level scientific, technical, professional and managerial positions, but also expected to be the engine for the country's economic growth. Research universities have promoted the economic development in America, which is a good example for China. To promote the cooperation and interaction between universities and industries is also an important agenda for the reform of Chinese higher education. More higher education funding should be appropriated to research activity and to establish research universities.

### 3.1.3 Increasing Private Demand of Higher Education

In the 30 years after 1978, Chinese economy has developed at the average high growth rate of over 9%. During the process, the industry structure of Chinese economy was upgraded. Knowledge and technology became much more important than before. The private benefits from education increase fast with the development of Chinese economy. Research shows

that persons with higher education have outstanding advantages concerning income. Higher education has become an investment which can entail profit for individuals in mid 1990s (Chen, 2004a). The person with higher education can earn more through industry mobility. And average return to one more year of education is 6%. Research shows that the rate of average income increase caused by higher education is higher than primary education (Shi, 2008).

The high private benefits promote the private demand of higher education. According to a survey (Han, 2008), about 90% of Chinese parents hope their children can have higher education. 69% of Chinese parents would like to support their children even by borrowing money. And according to another survey, 64.1 of investigated Chinese save money for paying for future education of their children (Han, 2008).

### 3.1.4 Globalization and Internationalization

Great global changes have occurred simultaneously with the economic development of China in the past 30 years. Those power shifts in global order have provided both political and economical opportunities for China besides challenges and pressures. To get advantages of the global competition, China has tried to develop its own powers. Economic power is important to win the competition. Science and technology is the core of productivity. Higher education is the ground of science and technology. An advanced higher education system became critical in the global competition.

How to raise the science and technology competitiveness through higher education is not only asked by economists but also by educators. In 1990s, the importance of fundamental research had been emphasized. Some basic research institutions of the Academy of Science were transferred to universities to strengthen research capacities of Chinese higher education. But the funding for fundamental research in higher education remained limited. New funding sources need to be explored and the efficiency of using public funding of higher education need to be enhanced. It is the time to reform higher education funding system.

Furthermore, international experiences show that cost sharing is the main way for higher education institutions to get more funding. UK began to charge tuition fees in 1998. Austria began to charge tuition fees in 2001. USA increased tuition fast after 1980s. The ratio of

tuition fees to total business incomes of USA's public higher education institutions increased from 13% of year 1980-1981 to 19% of year 1995-1996. And the average tuition fees, costs for boarding and food in public higher education institutions were USD 8,046 in year 2001-02 in USA (Chen, 2004a).

## 3.2 The Strong Demand of Domestic-Study Student Aid

The most obvious impacts of cost sharing policy in Chinese higher education can be seen in two ways: increasing cost of higher education for all students and redistribution of higher education opportunities among students from families of different social economic classes.

### 3.2.1 Increasing Cost of Chinese Higher Education

Charging tuition fees with the students in Chinese higher education started from year 1989. At that time, the tuition fees were relatively low or symbolic. The tuition fees increased dramatically in 47 universities in year1994 as trial operation for the first time. And tuition fees began to be charged unitarily with all undergraduate students from year 1997. Level of tuition fees for public higher education institutions are fixed by the Ministry of Education. The level of tuition fees for Minban higher education institutions are fixed under the guidance of the Ministry of Education. Generally the tuition fees for the Minban higher education institutions are higher than that for the public ones. There are also some variations of tuition fees among different majors and different universities .Generally the tuition fees is about 5,000-6,000 RMB and cost for boarding is approximately 1000-2000 RMB annually. But for those majors of performing arts, tuition fees might be as high as 20,000 RMB annually. The national limited ratio of tuition fees to total business operation cost is not more than 25% (Ministry of Finance, 2008). The tuition fees of most universities reached the limit. The tuition fees of some local government owned universities has surpassed this limit.

### 3.2.2 High Cost of Higher Education for Average Families

Students must pay tuition fees and cost for boarding to universities in Chinese higher education according to policies. Amounts of tuition fees and cost for boarding increased very fast from 1993 to 2001. Increasing of tuition fees is faster than that of normal family's

income. From year 1993 to year 1997, tuition fees increased at average rate of 27.65% (Wang, 2000). Especially, it increased 40.3% from year 1998 to 1999 (Adapted data of Table 7). The Chinese government recognized the high level of tuition fees and the serious problems aroused by it in 2000. A regulation was made that tuition fees of year 2001 can not exceed that of year 2000 for any reason. And this regulation continues until today. But there were still very small increases in reality, but they were not much (see table 7). The cost for boarding increased to average 1200 RMB per semester.

Furthermore, other costs for campus living increased also fast. Few parents want their own children to have lower living standards than others. Most parents would like to pay the high living expenses that are heavy burdens for families. But some parents still can not pay for them although they have tried very hard to make money. There are still many poverty students who can not enjoy the student life like others.

The increase of tuition resulted in that the proportion of tuition fees to per capita disposable income increased dramatically. Although tuition fees stopped increasing from 2001, the tuition fees have been already too high for ordinary Chinese families. Furthermore, cost for boarding and other costs increased much accordingly. Paying for the children in higher education institutions becomes a heavy burden for ordinary Chinese families. Let us assume that the average tuition fee is about RMB 5,500 per student per year in public institutions in 2006. Plus the boarding cost and other fees, the total expenditure paid by the students amounted to about RMB10, 000. According to the statistics year book 2006 (National Bureau of Statistics, 2008), the disposable income per capita of city residents and rural residents are RMB 11,759 and RMB 3,587 respectively. Household Engle coefficients of city and rural areas are 35.8% and 43% respectively. After deducting the basic household expenditure, the per capita disposable income of city residents and rural residents are only RMB 7,550 and RMB 2,045. Even those normal urban families have difficulties to pay for higher education for one child, let alone those families in rural areas. The tuition fees and cost of higher education for the rural students are indeed heavy burdens for their families. To pay for higher education, most families have to save money many years in advance.

Lastly, the proportion of cost borne by students to education operation cost per student of Chinese higher education institutions is at a high level compared with those of other countries and areas. In the year 2001, the ratio is 24.21% in China, which is higher than that

of US, Australia and some other countries (see table 3). Furthermore, the evaluation method of operation cost is not scientific. There are not regulations on how to calculate the average operation cost per student now. Some universities include other costs that are not related to education activities when they calculate education operation cost. So the calculated education operation cost is higher than the actual cost sometimes, which results in that the students have to pay more although the ratio is the same.

**Table 3 Ratio of Cost Borne by Student to Average Education Business Cost**
Year: 2001

| Country &Area | China | China HK | US | Australia | India | Indonesia |
|---|---|---|---|---|---|---|
| Ratio % | 25 | 18 | 18 | 20 | 18 | 11 |

Source: Sun, 2005

### 3.2.3 Increase of Poverty Students in Domestic Higher Education

As Table 4 shows, number of students in higher education increased rapidly since 1988. With the increase of students in Chinese higher education, the number of poverty students increased accordingly.

**Table 4 Numbers of Students in Higher Education**
Unit: million persons
Year: 1988-2006

| Year | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 |
|---|---|---|---|---|---|---|---|---|---|---|
| Enrollment | 0.67 | 0.60 | 0.61 | 0.62 | 0.75 | 0.92 | 0.90 | 0.93 | 0.97 | 1.00 |
| Present students | 2.07 | 2.08 | 2.06 | 2.04 | 2.18 | 2.54 | 2.90 | 2.91 | 3.02 | 3.17 |
| Year | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | |
| Enrollment | 1.08 | 1.60 | 2.21 | 2.68 | 3.21 | 3.82 | 4.47 | 5.04 | 5.40 | |
| Present students | 3.41 | 4.13 | 5.56 | 7.19 | 9.03 | 11.09 | 13.34 | | | |

Source: Ministry of Education, 2008

Poverty students are defined as economic income shortage students. There is not a uniform definition of poverty students. According to international experiences, we need to consider at least two points to define poverty student: the income of the student's family and the consumption standard of the city where the university is. Although different universities have different procedures of defining poverty students, most of universities make decisions based on the poverty witness from the local government where the student is from and the investigation on consumption level of the student during studying.

From 1995, with the increase of higher education tuition fees and other costs, the number of poverty students in higher education has been increasing dramatically. The number of

poverty students was 1 million in 1996, 1.42 million in year 2000, 2.7 million in year 2004 and 3 million in year 2005 (Ministry of Education, 2008). Generally, the proportion of poverty student to total students in universities is 20％ (Ministry of Education, 2008).

And the distribution of poverty students among universities in different cities is uneven. The highest proportion of poverty students is in the universities of western poor cities. It is as high as 40% of poverty students in Qinghai province universities (Pang&Hu&Han, 2006).

There are some main reasons for poverty students in Chinese higher education as follows:

***Low family incomes in rural areas***

In rural areas, the income level is far lower than that in urban areas. In 2006, the income gap between urban area and rural area was 3.2:1. There is 43.9% population of China living in rural area in 2006. There are about 14% of family in the rural area whose income is in poverty according to international standard. There are about 56 million persons with income per capita lower than RMB 1000 annually. These people with such low income account for 7.6% of total population in rural areas. Most families can only afford their basic necessary living costs such as food, clothes and housing. They can not afford higher education. Generally, about 40% of students in higher education institutions are from rural areas (National Bureau of Statistics, 2008).

***Low family incomes in western areas, traditional poor areas, minority areas***

According to statistics, about 70% poverty students are from those areas. Due to historical reasons, the economies in these areas are underdeveloped and the industrial structures are out of date, which leads to great unemployment. This structural factor is one of the main reasons for the emergence of large numbers of poverty students.

***Faster increase of tuition fees than that of disposable income per capita***

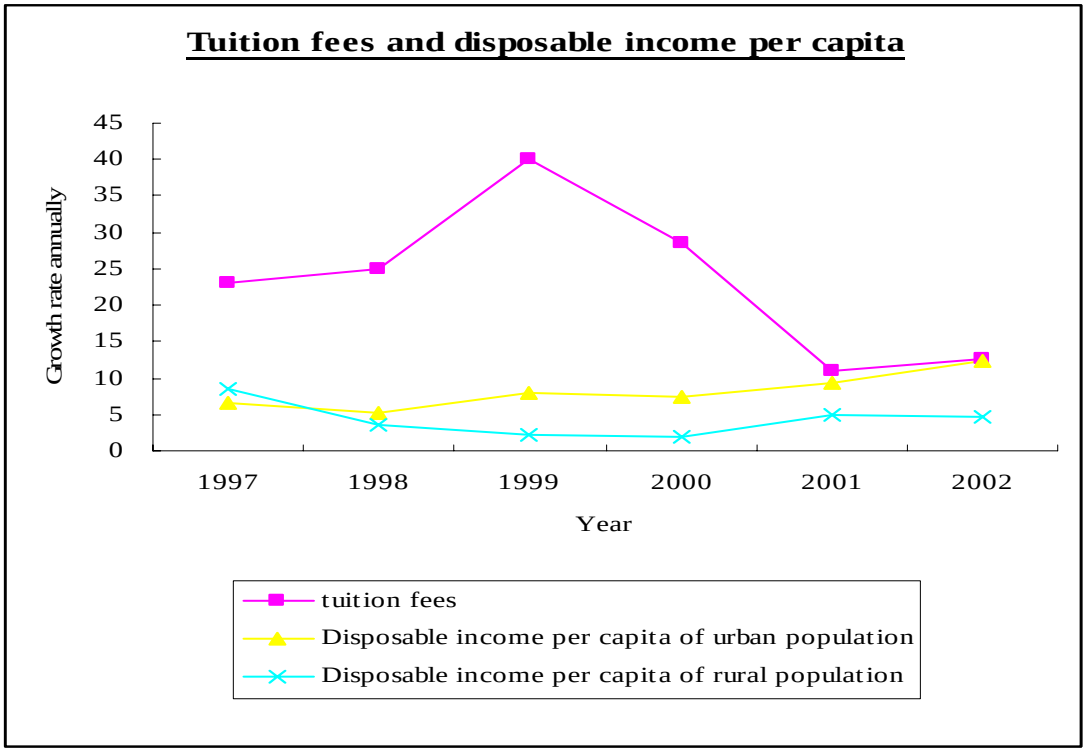
As Table 5 and Figure 1 show, the tuition fees for higher education increased much faster than the disposable income per capita of urban and rural populations. In particular, the tuition fee in 1996 is slightly lower than the disposable income per capital of rural population. On the contrary, after 7 years, the tuition fee in 2002 is over twice of the disposable income per capita. The rapid increase of tuition fees definitely produces more and

more poverty students.

**Table 5 Tuition Fees and Disposable Income per Capita**
Unit:Yuan
Year:1996-2002

| Year | Tuition fees | Disposable income per capita of urban population | Disposable income per capita of rural population |
|---|---|---|---|
| 1996 | 1,800 | 4,839 | 1,926 |
| 1997 | 2,240 | 5,160 | 2,090 |
| 1998 | 2,800 | 5,425 | 2,162 |
| 1999 | 3,900 | 5,854 | 2,210 |
| 2000 | 5,000 | 6,280 | 2,253 |
| 2001 | 5,200 | 6,860 | 2,366 |
| 2002 | 5,300 | 7,703 | 2,476 |

**Figure 1 Disposable Income per Capita for Urban Population &Tuition Fees**
Year: 1996－2002




Source: adjusted data of National Bureau of Statistics, 2008

### 3.2.4 Capital Market Failure

Many poverty students emerged with the increase of tuition fees and other costs of Chinese higher education. The capital market can not function well to solve this problem either. Capital market cannot provide enough money to invest in higher education even though it functions very well in other economic activities. The key problem is that banks do not have

enough motivation to loan money to students for paying tuition and other costs for higher education. It is called market failure.

Market mechanism was described as an invisible hand by Adam Smith (Smith, 1776). The most important characteristic of market mechanism is efficiency. Market does not always produce efficiency under all circumstances and there are market failures. Classic examples of market failures are found regarding to public goods, the existence of externalities (spillover), information asymmetry or monopoly powers. There is debate on whether higher education is public goods. At least all other characteristics of market failure mentioned above are relevant to higher education. Information asymmetry is most relevant to the capital market of financing students. Financing students is full of uncertainties. Those uncertainties bring up high risks for the investment. Firstly, the subjects of investment, students, are full of uncertainties. Nobody knows if a student can get satisfying result of higher education. There is possibility for the student to abort or not able to graduate from higher education. Secondly, the quality of the higher education is rather not transparent. Education is experience good. The qualities of educational programs are difficult to measure and cannot be observed in advance. Nobody knows what kind of real stuff can be taught to the students and to what extent teaching can be made successful. Thirdly, there are uncertain effects of this investment in the labour market. It is possible for the students not able to find a job after graduation or not able to find an average good job (Chevalier, 2006). If one of these situations occurs, the investment is unsuccessful to some extent. There will be high risks for the banks to recover the loans from students. So banks in financial markets would not like to loan money to students with this regards.

Under the above-mentioned background, public student aids is imperative and serves as an important way to handle the problems related to increase of tuition fees and other costs with higher education financial reform.

## 3.3 The Strong Demand of Study-abroad Student Aid

It was set as an important goal of national development strategy to enhance China’s own creativity of science and technology by “the Decision of National congress of the Communist Party of China on the Reform of the Education System” in 1985. It was stated

clearly again by the state report in the 17th National Congress of Communist Party of China in 2007.

Science and technology mechanism reforms started in 1985. After more than 20 years, China's own creativity of science and technology has been enhanced a lot, especially after 1998, when the object of building self creation system was put forward. But compared with the economic development, the developments of science and technology are very slow. The high tech industries with high added value are still very limited. China is especially weak in information, biology and medicine industries, for which technologies mainly depend on import from other countries. In China, there are more than 30,000 kinds of medicines. But more than 95% of them are made based on foreign technologies. Especially in biological medicine area, China almost has not any self-created technology. As for the information industry, more than 85% of CMOS chips and electronic parts and more than 99% of high tech CMOS and electronic parts demanded by Chinese market are imported from other countries. China is big in international trade, but still at the low end of international division. More than 60% of export from China is produced from manufacture goods. It means that China can only get profits from manufacturing activities, which is only small part of the total profits from the traded products. Although the amount of export from China is huge, the profits obtained by China are not proportional to the amount of export. This reality indicates the low advantages of science and technology of China compared with other countries.

"Science and technology are the most important productivity" was stated by Mr. Deng. And it is also certified by international successful experiences. Almost all developed countries have their own advantages of science and technology. The economy reform and open door policies gave China chances of cooperating with others countries and getting profits based on China's own advantages. To keep fast economy developments and strengthen the impacts in internationalization and globalization, China needs to continue developing more advantages of science and technology besides present resource advantages. With the coming of knowledge economy, this demand is strengthened. The developments of science and technology are the engines of high-speed and continuing economy developments of China.

How to enhance the creativity of science and technology is a critical question for China. Besides deepening mechanism reform, supporting more basic researches and strengthening

strategic management, learning from other countries is an important and necessary way. And international experiences provide successful examples, such as Japan and Korean.

As stated above, China imported and bought a lot technology or know-how from other developed countries. But learning does not only mean importing or buying from others. Furthermore, to keep their own advantages, almost no country will transfer or sell high level technology to other countries. To change the situation of imitating others to creation, China need to train more human resources with abilities of creation. Therefore, it is necessary to send potential human resource to other countries to cooperate and learn from the people who create science and technology for their own countries.

Furthermore, higher education as social investment has close relation to economic growth. Strengthening quality and creation ability of graduates from higher education is critical to the development of economy. With short history and traditional mechanism, there are still many restrictions to the quality of higher education in China. Lacking international level academic faculties is common in Chinese higher education. Study-abroad aid has always been an important way to subsidize faculties to study advanced knowledge abroad and then help to enhance the academic ability of the faculties. With the fast developments of Chinese higher education and economy in the past 30 years, there is stronger demand for more study-abroad aid for the faculties of higher education.

## 3.4 The Development of Student Aid Policy

There are two categories of student aids in Chinese higher education. One category is the aid for the students to study in Chinese domestic higher education institutions, and the other category is the aid for students to study in foreign higher education institutions. This paper will call them ‘domestic-study student aid’ and ‘study-abroad student aid’ respectively. Both categories have been reformed and changed a lot in the economy and higher education development of China.

### 3.4.1 The Development of Domestic-Study Student Aid Policy

***Free Higher Education (1949-1989)***

Chinese higher education began to resume in1949 with the foundation of P.R.C. Under the highly centralized socialism plan economy in China, Chinese higher education was also highly centralized at that time. The biggest feature of plan economy is that the human capital, material and fund allocation are made according to the government plan. Under this mechanism, Chinese national government undertook all governance and management of higher education. Fiscal appropriation is the only funding source of higher education.

During that period, student aid was made in the way of ‘free of charge’ and ‘Renmin grant’. No student was charged for tuition fees and cost fees for boarding. And all students got grants to pay for food and books. This student aid policy was regulated by two documents issued in 1952 and last for about 30 years.

***Establishment of Student Aid Policy (1989-1997)***

China began the Chinese socialism economy reform from the year 1978. Mr. Deng Xiaoping pointed out that there is no contradiction between socialism and market economy in 1985. Socialism market economy was stated as the object of Chinese socialism economy reform in 1994.

The funding system of Chinese higher education was reformed with transition from the socialism plan economy to socialism market economy. With the socialism market economy reform, the proportion of fiscal appropriation of government to GDP decreased from 31.25% of year 1978 to 10.7% of year 1995. Furthermore both private and public demands of higher education increased rapidly. More students want to have higher education and social economic development need more graduates from higher education. Single government funding policy of higher education can not meet the demand anymore. Students and institutions began to be required to share the cost with government. From year 1989, some students began to be charged for tuition fees, cost for boarding and some other fees. At the same time some students were still not charged any fees same as before.

With the reform of higher education funding system, Chinese government began to establish a combined differential student aid system. The student aid system includes scholarship, fellowship, work study plan, allowance and exemption or reduction of tuition fees for poverty students.

***Establishment of Study Loan System (1997-2007)***

From 1997, all undergraduate students in higher education institutions were required to pay tuition fees, cost fees for boarding. And the tuition fees level increased fast at the average rate of 23% annually during the years from 1997 to 2001. With the rapid increase of tuition fees and cost fees for boarding, many problems come out, especially the problem of poverty students.

To cope with the problem of poverty students, study loan project was started from year 2000. The government compensates the loans' interest to banks that provide the loans to the students. Some banks were appointed as the operation banks of study loans. The ratio and the total amount of compensated interest were decided by central or local governments. Due to low economic incentives and higher risk for banks in the study loan project, the study loan project was not well implemented. Hence, the Chinese government reformed the study loan project in 2004. In the new study loan project, the government and institution provide risk subsidy to banks and all banks can bid to be the operation banks of study loan project.

***The Establishment of Wholesome Student Aid System in 2007***

The wholesome student aid system includes grants, loan, scholarship, work study plan, allowance for poor students and exemption or reduction of tuition fees.

National grant: It is to compensate living cost of undergraduate poverty students. It is 2000 RMB per year. The number of aided students is about 20% of total number of students in Chinese higher education.

National Scholarships: It is to reward and subsidy the excellent poverty students.

Free education for students in normal university: The seven normal universities owned by the Ministry of Education are very famous in China. None of the seven normal universities will charge tuition fees and cost fees for boarding with all students. And all students get food subsidy.

**Table 6 Type of National Scholarships of Chinese Higher Education**

| Government scholarships | Objects | Amount RMB/Person | Number | Requirement |
|---|---|---|---|---|
| National scholarships | undergraduate | 5,000.00 | 533,000 | Outstanding & poverty |
| Excellent students scholarship | undergraduate | 8,000.00 | 50,000 | Excellent |
| Special major scholarships | undergraduate | - | - | Special major |
| Fixed training scholarship | undergraduate | - | - | Going to work to specified area |
| Normal graduate scholarships | graduate | | All | Graduate |
| Excellent graduate scholarships | graduate | | | Excellent graduate |

Source: Ministry of education, 2008

Study loans: All post secondary education students in public higher education institutions who are in poverty can apply for study loans. Only very few of private higher education institutions have study loans.

**Table 7 Types of Study Loans of China**

| Loan | Stakeholders | Fund sources |
|---|---|---|
| National study loan | Government, institution, bank and students | Fiscal interest and risk compensation for the loan from banks |
| Family credit study loan | Government, bank, family and student | Fiscal interest and risk compensation for the loan from banks |
| Interest free loan | Institution and student | Fiscal earmark appropriation |
| Commercial study loan | Bank and student | Bank |

Source: Ministry of education, 2008

Work study program: Students get aid through working as teaching, research and administration assistants or working in other departments of universities. All the aid is funded by the fiscal earmark appropriation.

Super poverty student aid: Students from the poorest areas who have not enough money to pay for the daily life expenses can apply this type of aid even though they have some other types of aid e.g. scholarships or study loan.

Tuition exemption or reduction: Some students still can not afford the daily life expenses after getting all kinds of scholarships and aid, especially students who are orphans, minority, or child of martyr. Those students can apply tuition exemption or reduction.

Green gateway mechanism: all types of the above-mentioned student aids are arranged after students have begun studying in universities. But before having begun studying in universities, all the fees must be paid according to the regulations of the universities. To resolve this difficulty, the poverty students are allowed to register in universities by postponing tuitions payments until getting necessary students aid, which is called green gateway mechanism. In 2006, there were 330,000 students through green gateway, about 44% of all poverty students of that year.

The central government fiscal appropriation for domestic-study student aid was RMB 9.5 billion and it will increase to RMB 20 billion in 2008 (Ministry of Education, 2008).

### 3.4.2 The Development of Study-abroad Student Aid Policy

Study-abroad student aid does not have a long history in China. It started from the beginning of 1950s, at that time China sent many students to the former Soviet Union and eastern European countries. But there was no policy document regarding to it at that time. And there was no development during the culture revolution period of China. Only after 1978, study-abroad student aid policy began to be established with the development of open door policy. Its development can be outlined as following stages. Scholarship is the only kind of student aid for study-abroad.

***Establishment of National Study-abroad Student Aid (1978-1986)***

The national government arranged special test to select qualified staffs from higher education institutions and government departments as students to study aboard. Most of students went to US, Germany, Italy, UK, Canada and Australia

***Combination of Study-abroad Aid Policy with Return Policy (1986-1996)***

Based on the low rate of returning of students, the student aid began to be connected to the student return policy after graduation from foreign higher education institutions. An agreement was signed between the students and department or institutions which they worked for. The contract regulates that the students must return to work in China after graduation, otherwise there will be economic punishment.

***Development of Study-abroad Aid Policy (1996 -2006)***

China Scholarship Council was established in 1996. New procedure of application for study-abroad student aid was established according to the principles of private application, equal competition, professional evaluation and appointment on agreement.

Scholarship for the self-financed students studying abroad was established in 2003. There were about 1100 students who got this scholarship until 2007.

***Fast Development of Study-abroad Student Aid through Cooperation (2006-Now)***

The fresh graduate students in domestic higher education institutions were listed as the qualified candidates of study-abroad student aid for the first time. Seven critical subjects were selected as the critical aided areas: Telecommunication and information technology, agriculture high tech, life science and personal health, material science and new material, energy and environment, engineering science, applied social science and WTO related subjects (Ministry of Education, 2008)

At the same time new models of student aid have been created through cooperation with foreign governments and higher education institutions, Chinese local governments and higher education institutions. Now there are three types of study-abroad student aid: full aid, partial aid and combined aid.

# 4. The Rationales and Goals of Student Aid Policy

## 4.1 The Rationales and Goals of Student Aid Policy

### 4.1.1 The Rationales

Two main rationales have been identified in international student aid policies in higher education (McPherson& Schapiro, 1998: Kivinen& Hedman, 2000: Albrecht& Ziderman, 1992). They are to assist poverty students to improve equity and train excellent human capital to increase efficiency.

***Assist Poverty Students to Improve Equity***

Equity in higher education is primarily focused on the equal opportunities of higher education. It implies that if individual A and B have similar tastes and abilities, they should receive the same education irrespective of factors which are regarded as relevant, e.g. income (Barr, 1998). And the opportunities have two levels: (1) the opportunity of having general higher education irrespective of what types and levels of higher education institutions (2) the opportunity of having a specific kind or level of higher education.

Due to structural income gap between different social groups and the increasing tuition fees in higher education, poverty students have been one of the commonest phenomena in worldwide higher education for many years. Poverty has been the main barrier of entry into higher education for some students from middle and low income families. Those poverty students can not have the same opportunities as those from high income families regarding access to higher education. The unequal opportunities on access to higher education for the poverty students will result in further poverty of the students. Higher education is a very critical factor of future income and other non economical benefits. Furthermore, the low education background of students will affect their children with regard to the access to higher education accordingly. The problem of poverty students becomes easily a vicious circle. On the basis of equality of human being and facing the inequality in higher education, governments need to intervene to change the situation. Although the absolute equality of access for all students can not be realized by student aid, at least it can help to improve the

situation to a large extent. Based on this rationale, student aid has been the choices for almost all the countries in the world.

***Training Excellent Human Capital to Increase Efficiency***

Efficiency is concerned with producing types of educational activities which equip individuals economically, socially, politically, and culturally for the societies in which they live (Barr, 1998). Through attending educational activities, personal productivity is increased and at last the social economic efficiency can be increased.

Based on the function of higher education, the students with higher education can make greater contributions to transmission and creation of knowledge. “Knowledge is power” as said by Bacon, knowledge can make people more intelligent. Knowledge is the basis of science and technology creation. Knowledge is deemed to be the most fundamental power of human and society developments. The graduates with knowledge from education will be the main power of science and technology, and then the main power of social and economic developments. Economic historians have shown the fundamental roles played by knowledge based technology in economic growth throughout history (Castells, 2000). With the coming of knowledge society, knowledge becomes much more important than ever.

There are differences between different students in education achievements and other work abilities. There are no disputes on that students with more intelligence are more possible to make greater contributions to a social, national and even the international developments. All countries have already realized the importance of human capital so that they encourage students to be as good as possible and make contribution as great as they can in the future. Most countries have already invested much resource in higher education to train world advanced scientific and technical human resource. Rewarding student aid is one of the important ways to facilitate potential students to get best education and contribute the developments of society and economy as much as they can.

### 4.1.2 The Goals

Based on the two above basic rationales of student aid, the national Student aid policies serve a variety of quite different public goals at the same time, which are as follows (Johanstone, 2004):

Making up for the missing parental contributions for those parents who are poor (e.g. low incomes)

Providing even larger aids to low income or ethnic or linguistic minority or rural families in order to further encourage the children of such families to try higher education in order to reduce the persisting under representation of such youth at all levels of enrolment, persistence and degree completion.

Rewarding high level of secondary school academic achievement, possibly out of a belief that rewarding aid encourages such socially desirable behaviour

Rewarding high level of academic achievement in the college or universities: perhaps it is required to maintain a certain level of academic achievement in order to keep the grant (or alternatively to keep the initial award of financial assistance a non-repayable rewarding grant rather than being converted to a repayable loan because of disappointing academic performance)

Encouraging students to enter targeted fields of study that are deemed to be socially important- such as teaching, language study, social work, science or military service.

The rationales and goals of student aid policies of different countries have different priorities. This paper analyzes the priorities of rationales and goals of student aid policies in Chinese higher education. The human capital theory and modernization theory is used in the paper to support the analysis.

## 4.2 The Rationales and Goals of Domestic-Study Student Aid Policy

### 4.2.1 The Rationales

The two rationales of assisting poverty students and training excellent human capital are both relevant to the domestic-study student aid policy. But assisting poverty students are more important rationale than rewarding excellent human capital for domestic-study student aid.

The first place of rationale is to assist poverty students for domestic-study student aid policy. The main motive is to subsidize poverty students with the tuition fees and living expense during studying period in higher education. The student aid policy is one most important measure of the government to help the poverty students finish the higher education studying. This rationale can be explained by the human capital theory. According to human capital theory, there are private and public benefits from higher education. Assisting poverty student emphasizes on the individual benefits of students from higher education. Through having higher education, poverty students can have higher possibilities of getting rid of their own families poverty and moving to upper social classes. The private benefits from higher education are important to improve equity among different social economic classes. So public interests are realized through achieving more social and economic equity among different social classes and different areas at the same time.

The second place of rationale is to train excellent human capital for domestic-study student aid policy. There are few student aids in order to reward excellent students, such as rewarding scholarships in Chinese higher education. This rationale can also be explained by the human capital theory. Compared to private benefits, public benefits from higher education are more emphasized by the rationale of training excellent human capital. With more excellent human capital, China can have higher creativity of science and technology. Creativity of science and technology is the most fundamental element in social and economic developments. Furthermore, Deng's modernization theory can also be used to explain this rationale. According to Deng, knowledge and technology are the most important factors of productivity. Training excellent human capital is an important way to increase knowledge and technology, high ability of creation and productivity. With the coming of knowledge economy, human capital becomes more critical to the development of a country in the internationalization and globalization.

The priority of the two rationales for domestic-study student aid policy can be seen and explained from following aspects: firstly, there are no specific regulations on the amount and number of scholarships and with aim to train excellent human capital. But in contrast, the student aids with aim to assist poverty students are specified clearly regarding the amount of the student aid and the number of planed assisted students. Secondly, universities are not treated equally in getting funding. More prestigious universities get more funding from government. For example Tsing Hua and Peking universities can get much more funding

from government in order to establish the world class universities. It means the qualities of education are usually ensured by funding universities but not by funding students directly. Thirdly, most students work very hard as long as they have the chances of attending higher education to increase the possibility of getting a good job after graduation. The personal incentives and family incentives are already strong enough to stimulate students to try their best. As long as the personal need of assisting is met, the public benefits from higher education will be realized accordingly.

### 4.2.2 The Goals

Based on these two rationales, the domestic-study student aid policies have several different public goals. With a combination of different kinds of domestic-study student aids in Chinese higher education, there are as many goals as shown in following:

***Serve for National Economy Development***

Production and application of knowledge and training skillful labour force are believed as two main goals of higher education (Manuel, 2001). Given the importance attached to efficiency and equality in higher education as stated before in this chapter, one important goal of domestic-study student aid is to serve for Chinese economic developments.

With the expansion of Chinese education capacity, the average education time of population increased to 8.5 years. The average education time of newly increased is more than 10 years. There are more than 70 million populations with higher education degrees. China is undertaking faster transmission from a country with big population to one with big human capital. We have made great success on education, but we still need to continue and improve it. Prioritizing education to develop more human capital was pointed out again by Mr. Hu[2] in 17th National Congress of Communist Party of China. With improvement of student aid policies, there will be more opportunities for students from low income families to attend higher education. The student aid policy will speed up the process of transmission from big population to big human capital resources. Knowledge economy is an economy that is directly based on the production, distribution and souse of knowledge and information

[2] Hu Jintao (1942-) is the chairman of P.R.C. 2003-now

(OECD, 2006). The role of higher education for economic development will be strengthened to a greater extent in China, and the student aid policy in higher education will have wider impacts on the development of economy. All kinds of student aids will indirectly help to realize this goal.

***Encouraging Children of under Represented Families to Attend Higher Education***

Domestic-study student aid of Chinese higher education has provided even more aid to students from low income families in order to further reduce the persisting under representation of those students at all levels of enrolment, persistence and degree completion. And most of those low income families are in rural areas, linguistic minority areas and traditional poverty areas. As shown by research, the social economic backgrounds of families affect the children's choices of higher education (Johnstone, 2006). The children from affluent families seemed to dominate the proportion of students even before charging tuition and other fees in higher education. This is not only because of their great power but because they have the advantages of greater cultural capital from families, secondary schools and peer which in turn imparts not only knowledge itself but also academic ambitions and methods and habits of effective study (Johnstone, 2006). With charging tuition fees of higher education, higher education becomes more impossible for children from low income families. Tuition and other costs of higher education make poverty students more under represented than before. Although they want to and have the capability of attending higher education, they can not do it because they can not afford it. Families with different incomes response to the increase of tuition fees differently. The lower incomes of the families are more sensitive to the level of tuition fees. It means the increase of tuition fees will result in less students who go to universities from poor families, but the effects on the students from affluent families are little.

The proportion of those under represented students from low income families is big in China. There is a big gap between rich and poverty in China. It is thought that the 80% of bank savings is owned by 20% rich peoples, and only 20% of bank savings is owned by 80% poverty peoples. As stated before, this distance occurs for many reasons, such as the traditional urban and rural gap (the ratio between urban and rural disposable income per capita is 3.28 in 2006) (National Bureau of Statistics, 2008), history revolution area poverty (e.g. Gansu province), minority groups (e.g. Tibet and Sinkiang minority), the newly

increasing western and eastern gap and the intensified gap between different classes in urban area with the development of economy reform.

To meet the need of under represented students from low income families is seen as one foremost goal of Chinese higher education student aid from the beginning. And it will continue in the future. There are many kinds of student aid specified to this goal in Chinese higher education, such as national grant, graduate grant, super poverty student aid, work study program, tuition exemption or reduction for those students, even the national scholarships with both meeting poverty students and rewarding excellence goals. And student loan is the most important student aid to meet this goal. Lastly the green gateway mechanism ensures that all students from under represented families get registered in higher education institutions. The green gateway mechanism is to postpone payment of tuition fees and other fees for all the students who can not afford them before they get accordingly student aid. It is a national policy. All the higher education institutions have to abide by it.

***Rewarding Academic Achievement in Higher Education Institutions***

Rewarding academic achievement was usually made in non economic ways in China before. There were many kinds of non economic rewarding for students in Chinese higher education institutions, such as the honour of national level, provincial level and institutional level excellent students. With the development of market economy in China, economic reward becomes more and more popular. But usually the amount of reward money is not big. The honour of reward is much important than money to some extent for students who are not short of money. Honour during higher education is an important selling point for the students in the labour market. It does not matter how much money one get from the student reward during studying. Furthermore, the number of excellent student titles is very limited, the higher level of student reward, the more limited. In addition, there is no specific regulation on the amount of student rewards which is subjected to institutional regulations. In this sense, we can say that rewarding academic achievement is not a main goal of domestic-study student aid in Chinese higher education. But at the same time it is an important goal of student aid because its modelling function is very important for all the students. Role model is very important for Chinese society. There are all kinds of role models in China in different fields, from national level to institutional level. Chinese people would like to have those role models to learn from and get inspired by them.

There are some kinds of student aids with the goal of rewarding academic achievement, such as the excellent student scholarships, excellent graduate scholarships, and even national scholarships with the aim of rewarding excellent poverty students. The evaluation of excellent students in Chinese higher education is based on many criteria, which include academic achievement, morality, and social life in the previous academic year.

***Encouraging Students to Enter Fields Important for National Development***

The national demand of human resources can be better met through student aid policies. The government can put more student aids on majors with higher public benefits, national urgent demands, expected low personal incomes and narrow choices of future work.

At different stages of social and economic development of a country, there are different hot majors in higher education. For example, in present information economy society, the majors of informatics, economy and financial are demanded most by students in China. Certainly those majors are important for the information economy development of China. at the same time, there are also some other basic fields which are very important for national developments, but there are not enough students for those fields, such as teaching major, agriculture, social work, science or military service. There are many reasons for under-demand for those majors, such as the interests, dangers and difficulties. But the expected low private return from those majors is the most important reason. A big difference between China and other developed countries is that there are not well established social security schemes in China. Income is the most important resources of life expenses. If one person can not get a job, the living expense is in problem, let alone paying for other big expenditures such as medical and educational expenses. So everybody is trying to make and save money as much as possible for future possible expenditures. Secondly incomes are very different among different industries. The incomes of the jobs in related industries are low. So there are not enough students to study in those fields.

There are many kinds of student aid with goals of encouraging students to choose teaching, agriculture, ethical study, sports and navigation etc. From the fall semester 2007, all tuition fees and cost for boarding for all students in the seven normal universities owned by the Ministry of Education began to be covered by the government (Ministry of Education, 2008). This policy aims to train excellent teachers for secondary education in the rural and poverty areas. There are also special grants for the students to study in agriculture, sports

and maritime majors. All the students in those subject areas can get this kind of special grant.

***Encouraging Students to Work in Specified Areas after Graduation***

There have been uneven developments between urban and rural areas, between eastern and western areas for long time in China. The gap between urban and rural areas began going down from 1994, but it began going up again from 1997. Up to now the per capita disposable income of urban areas is almost three times of that of rural areas (National Bureau of Statistics, 2008). If we take into account of non economic elements, e.g. medical subsidy, educational facilities etc, the gap is even bigger. In addition, the level of disposable income differs a lot even among cities. There are some centre cities and other peripheral cities among cities. There are three traditional big centre cities in China, namely, Beijing, Shanghai and Shenzhen. Recent years there have been some other cities which develop very fast. Around them there are several peripheral cities which benefit from the development of the centre cities. In the centre big cities, per capital disposable income per year is more than 20,000 RMB, but the per capita disposable income is only 10,000 RMB in middle developing cities. Secondly, the gap between eastern and western is also very big in China. There are historic reasons for this gap, but national strategy of prioritizing to develop eastern areas makes it even bigger. With the establishment economic reform and open door policy, most eastern coastal cities were selected to be developed firstly. From then on the speed of economy developments of eastern costal cities is much faster than that of western areas. Accordingly most students select to work in big cities and eastern coastal cities. Only a tiny part of students go to rural area after graduation. Most students from rural areas will not go back home city to work after graduation. Certainly the free float of resource is the characteristic of market economy, but this result of free float results in even bigger gap between urban and rural areas, between big cities and small cities, eastern cities and western cities.

Based on this phenomenon, a series of student aids are established for those students who will work in the specified areas for a specified period. Namely, there are kinds of contractual relationships between students and the future employers or cities where students will work for. Most of the specified areas are under-developed areas, such as Tibet, rural areas and some developing cities where is big demand for human capital. Actually the newly

established exemption of tuition fees and cost for boarding and food in the seven normal universities owned by Ministry of Education is also of this kind of student aid. The graduates will have to work in most teacher- demanding areas for a fixed period upon graduation.

## 4.3 The Rationales and Goals of Study-abroad Scholarships

Study-abroad has a long history in China and it has mainly to do with the existing economy and education gaps between China and developed countries. Most Chinese students go to study at universities in foreign countries where they hope to acquire knowledge that are substantially richer than those provided in China (Blumenthal, 1996) or there is no similar knowledge in China. So does the Chinese government who supports study-abroad.

### 4.3.1 The Rationales

Training excellent human capital to increase efficiency is the rationale of study-abroad scholarship, but assisting poverty students is not relevant to study-abroad scholarship. All the scholarships are designed for and allocated to excellent candidates. During the 30 years development of this policy, there are some changes regarding the funding sources and evaluation procedure, but the basic rationale has never changed. This rationale can be explained by the human capital theory. Human capital theorists view humans as the same economic resources as capital, other physical resources and etc. The benefits from human capital are both based on the quality and on the scarcity of it, the higher quality and more scarcity of human capital, the higher benefits from it. The rationale of study-abroad scholarships emphasizes on the public benefits from study-abroad in higher education. With more excellent and far-between human capitals, China can have higher creativity advantages of science and technology which are most fundamental in current social and economic developments and international competition. Certainly individuals will also benefit from study-abroad, but it dose not constitute the rationale of this policy. Furthermore, western modernization theory can also be used to explain this rationale. Western modernization theory views global development as an incremental non-linear continuum. Modernization is defined as a natural global process with the advanced western world at the farthest point of a continuum that exemplifies the direction for all other developing countries at the opposite end. “Given the contact between countries, it is always possible or easy for some of the late

comers to find interest in and understand some of the structures or devices of the former" (Levy, 1966). Through study-abroad, students can learn some successful experiences and knowledge critical to the development of western developed countries. And then the students can utilize them to the development of China. Utilizing foreign experiences and knowledge is the important way to decrease the gaps between China and western developed countries. Study-abroad policy is an important way to speed up this process.

### 4.3.2 The Goals

Due to funding restriction, the scale of study-abroad scholarships is still very limited. About 7000 students got this scholarship in 2006. Although the scale is small, the benefits from it are rather big. Study-abroad scholarship has following public goals.

***Enhancing the Development of Economy***

We have made great success in economy developments in the past 30 years, which is closely related to higher education. But we are still far behind western countries regarding science and technology and higher education. According to modernization theory, less developed countries can find useful knowledge in the developed countries. In the future knowledge economy, all activities are directly based on the production, distribution and use of knowledge and information (OECD, 2006). Because of the centrality of the knowledge economy in 21st-century development and the role of higher education in educating people for the new economy and in creating new knowledge (Altbach 1998), Higher education has assumed unprecedented importance, both within countries and internationally (Altbach, 2004). Higher education is increasingly seen as a central factor for future economy (Altbach& Teichler, 2001). To speed up the development of Chinese economy and higher education and to formulate Chinese own international advantages over western developed countries, China needs to learn advanced science and technology, advanced management experiences from developed countries. In its extensive analysis of the "Asian miracle," the World Bank (1993) emphasizes that the return of foreign-educated nationals has provided significant transfer of best practices and state-of-the-art knowledge. There are various ways of achieving this knowledge transfer. And it was identified the international movement of people as one of four principal channels for acquiring imported knowledge along with trade, foreign direct investment, and technology licensing (World Bank, 1998). Study-abroad is the

most important movement of people to transfer knowledge from developed countries. Based on this rational, China began study-abroad aid policy in 1978 shortly after the establishment of the economy reform and open door policy. From then on, the returnees from study-abroad have made extraordinary contributions to Chinese economy developments. From 1978-1996, 84% persons (Chen, 2003) and from 1996-2006, 97% persons (China Scholarship Council, 2008) who studied abroad have returned to China. The returnees started new research areas of science and technology and formulated a group of backbone young scholars with strong academic background in higher education. And research (Chen, 2003) shows that the public benefits from study-abroad are much more than private benefits.

### *Training Human Capital for Establishing World Class Universities*

The first official university was established in 1895 in China. During more than one hundred years, Chinese universities have experienced many great changes. Most universities were built based on foreign experiences, such as US and Japan. And after the establishment of PRC in 1949, the former Soviet Union university model also made great impacts on Chinese universities. With the establishment of economic reform and open door policy in 1978, Chinese universities got a critical turning point. From then on, the course structures, university management, teaching team were developed fast. In the 211 project[3], many local higher education institutions were merged to bigger universities in mid 1990s. Those universities were expected to enhance the quality by combing the advantages of different institutions and by getting extra funding from government. The capacity of Chinese higher education was increased fast by enlarging the enrolment in 1999. But the quality of higher education deteriorated along with the sudden enrolment enlargement. Then in 1998, the 985 project[4] was started. The central task of universities changed to improve the quality of higher education in the 985 project.

[3] 211 means the 100 privilege universities of China in 21st century. This project aims to systemize the regulation of higher education institutions. Many local governments owned higher education institutions were merged to big universities which became owned by the Ministry of Education. At the same time this 100 universities are prioritized in getting funding from central government appropriation with aim to enhance the quality of the universities.

[4] 985 Project started from May of 1998. it aims to establish Chinese world-class universities. In the first stage, there were 34 selected universities. It is also expected to enhance the general quality of Chinese higher education by enhancing the quality of the selected universities.

During the development of higher education, China kept learning from foreign developed countries. To speed up the development of higher education, Chinese government began to send many young teachers and researchers of universities by means of study-abroad scholarships. Those teachers and researchers were expected to learn advanced knowledge in foreign world class universities and then come back to improve the quality of Chinese higher education. The returnees have made great impacts on the development of Chinese higher education. As higher education becomes more important, there are more study-abroad scholarships for higher education institutions. In 2004, China Scholarship Council established study-abroad project for young backbone teachers which is sponsored cooperatively by the central government and institutions. In January 2007, China Scholarship Council began a new program with the aim to improve the quality of graduates of critical universities. Although Chinese higher education has already made big progress after the establishment of study-abroad scholarships, there is still a big gap between Chinese and foreign higher educations. According to a newly released world university ranking, only Tsing Hua University is listed among the first 151-202, and only 13 other universities are listed before the first 500（SHJT, 2008). It is still a long way for Chinese higher education to go in order to reach the world class universities. And the study-abroad aid projects will be developed faster to meet the demand of developing world-class universities and enhance the quality of Chinese higher education.

***Enhancing Research Capability in Seven Critical Fields***

With the developments of national and international economy and society, the critical fields for a country and for the world have been changing all the time. And there are always many new fields emerging. According to the " National medium-long term science and technology development scheme 2006-2020", China Scholarship Council adjusted the 7 target aided fields to: Energy, resources, environment, agriculture, manufacture, information critical fields and life, space, Nami and new material and humanities and applied social science. During 2007-2011, 5000 graduate students from universities will be selected and aided for study-abroad in the above seven fields in world famous universities. All the students will be fully aided, including all tuition fees, living expenses and international round-trip tickets during the study periods. And the tuition fees in their mother universities in China will also be exempted. This project aims to prepare strategic human capital for China's medium-long term developments, so all the students will take doctor degree programs or combined doctor

degree programs between their mother universities and foreign universities. This is the first time for the students at universities to be listed as the candidates for national study-abroad scholarships. The students are much younger than other candidates who are mostly staff in government department and higher education institutions. And all of them will take doctor degree programs which are higher than most of other study-abroad programs, such as master degree programs, training programs, visit scholars. Younger people with higher levels of programs will utilize the financial aid more efficiently. Then this goal of enhancing the research abilities of 7 target fields will be better realized.

***Supporting Development of Western Areas***

As stated previously in this paper, the western areas are far behind the eastern areas in China. To make strategic adjustments for national economy development and realize harmonized development among regions, Chinese government started the strategic western development in 2000. The government have invested more money in infrastructures, economy development and environment protection in western areas in last 6 years. But there is still great demand of high level human resources to support the developments of economy, education and research. Based on this demand, China Scholarship Council established special human resources training study-abroad projects for western areas. This project aims to select and send staffs in the government branches, state-owned big medium enterprises and higher education institutions to study or get training in the most demanding majors and fields in foreign famous universities, and then to speed up the developments of teaching, research and economy of western areas.

This project covers the western 13 provinces and the number of aided students is 600 every year. The study-abroad period for the students in this project is normally not more than 12 months. And almost all the programmes are non degree education or training.

***Encouraging Self-financed Student to Return***

Compared to the number of students who have studied abroad with support of study-abroad scholarship, the number of self-financed students is much bigger. In the 1990s, the number of Chinese students of study-abroad increased rapidly (see Figure 3). In 2004, the number of Chinese students of study-abroad toped the first in the world with a number of 34, 3126, covering 14% of the total number of the worldwide international mobile students (UNESCO,

2006). There are many reasons for the fast increase. Firstly, more and more families can afford study-abroad with the economy development of China. Some of Chinese become rich rapidly in southern eastern parts of China. And in recent years, the number of middle class in big cities increased fast. Secondly, the demand of international students in foreign countries has increased. With decreased public funding for higher education in foreign developed countries, cost sharing policy becomes a common choice for them. The total cost of higher education is shared by government, institutions, students and other relevant parties. To increase the funding from tuition fees, part of foreign institutions began to enrol more international self-financed students. Thirdly, the international competition of human resources among different countries is intensified with internationalization. Many countries have failed to meet the demand of competent research and IT human resource. Many developed countries established scholarships to attract foreign talented students with the aim to get them work for their countries after graduation. The US is a good example that competes for talents by means of enrolling more foreign talented students. Lastly, the self-financed study-abroad policy of China becomes more and more liberalized. The policy changed from limited self-financed study-abroad to encouraging it.

**Figure 2 Ratio of Students Coming back to Going out**
Year: 1995-2005

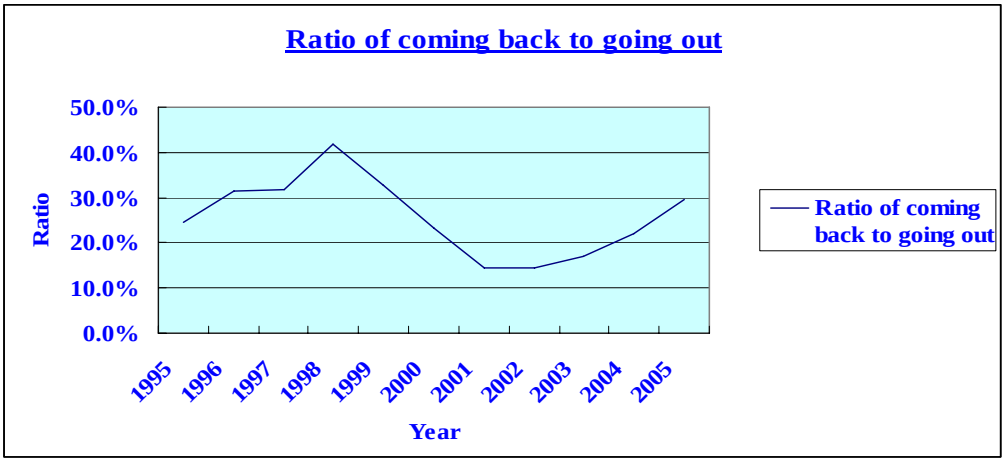
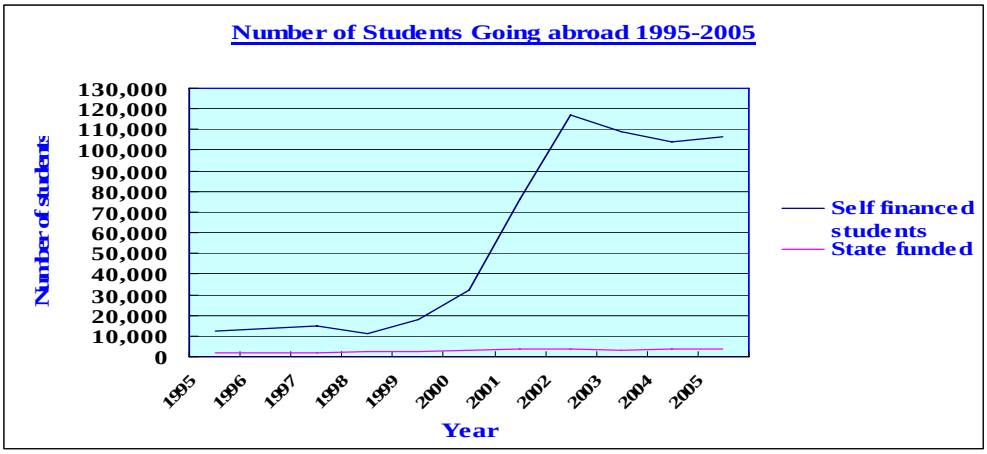


**Figure 3 Number of Students Going abroad**
Year: 1995-2005




Source: Ministry of Education, 2008

It should be good if all the self-financed students have returned to China after graduation. It means public benefits from the studying abroad are free for China. But the reality is totally different. The returnee ratio of self-financed students is very low (see figure 2). Brain drain from China is very big in this regard. It means that China can neither get the public benefits from study-abroad nor the public benefits from the previous domestic education of the students who have not returned after graduation from study-abroad.

To make some impacts on getting more self-financed students return back to China, China Scholarship Council established national excellent student scholarships for self-financed students who study abroad. This scholarship aims to rewarding the excellent doctor degree students and encourage them to return to China or make contributions to China in other ways after graduation from study-abroad. From 2003 until 2007 there were about 1100 students who got this scholarship. The amount of scholarship is 5000 USD per student.

# 5. The Main Challenges of Student Aid Policy

## 5.1 Raising Standard and Number of Poverty Student Aid

With the reform of higher education funding system, the student aid system has been experienced great changes from 1989 until now. In year 1999, student loan system was started and was improved in 2004 in many aspects. At the same time other kinds of national student aids have been added and the standards of aid have been improved. Especially in the year 2007, great progresses were made. According to national plan, an overall student aid system of Chinese higher education will be established very soon. But based on the plan, the level and number of student aid still can not meet the demand of poverty students.

There are some possible national level student aids for a poverty student to choose as shown in the following table 8. Generally there are two aims: to subsidize living expense and to subsidize tuition fees.

The national grant with aim to subsidize living expenses is 2000RMB/y, but the cost for boarding are average 1200 Yuan/y. there is only 800RM/y for other costs which includes foods, books and other materials. At the same time, students can also apply (5) & (6), which is about 2000RMB/y. Then the basic food and clothes can be almost ensured in cities with average living standard. But in some big cities where living standard is high, even the food and clothes can not be ensured by the aid, let alone entertainments. The standard of living expenses subsidy is too low. Most of poverty students tend to eat cheapest foods, seldom buy new clothes and have no entertainments. Many of the poverty students have not been home since they came to universities in order to save the train tickets. Furthermore, the number of national grant is limited.

The tuition fees subsidy such as national scholarship and excellence scholarship are about 5000-8000RBM/y which is enough for the students to pay the tuition fees. But the numbers of those scholarships are limited. Among those three ways of national study loan, national scholarship and excellence scholarship with aim to subsidize tuition fees, national study loan

should be the most important and extensive way, but it did not function as expected. Although the government has tried to improve it[5], there are still some problems which restrict its function. Firstly, cost and risk are high and profit is low for the operation banks of national study loans. the operation banks need to work more on study loans than on other normal commercial loans. The procedure is complicated and the amount of loan is small, but needs more work. At the same time, it is difficult to sensor the credit of the applicators, all the information are managed by the universities. Furthermore, the information that universities have is also very limited. And nobody can predict the recovery of the loan. So there is high risk for the banks. The risk subsidy is normally 10%, but ratio of not recovered loans is about 30%. So the business incentives for the banks are small. Secondly, the cooperation between higher education institutions and bank are not good. The bad information management of the graduates makes it difficult for the bank to recover loans. Then the banks do not want to loan any money for new students. Thirdly, missing personal credit information system in China is also an important factor of high rate of bad loans of students. It is difficult to track the information of a person if the person intends to avoid paying back the loan

**Table 8 Domestic-Study Student Aid System**

| Name | Amount | Number | Purpose | Remark |
|---|---|---|---|---|
| (1)National grant | 2000RMB/y | 20% | Live subsidy | Average poverty students |
| (2)National study loan | 6000RMB/y | - | Tuition fees | Start from second year |
| (3)National scholarship | 5000RMB/y | 5% | Tuition fees | Start from second year |
| (4)Excellence scholarship | 8000RMB/y | 0.5% | Tuition fees | Start from second year |
| (5)Work study plan | 2000RMB/y | - | Live subsidy | Super poverty students |
| (6)Super poverty grant | - | - | Live subsidy | Super poverty students |
| (7)Tuition fee exemption and reduction | - | 5% | Tuition fees | Super poverty students |

Note: 1, the number is the ration of aided students to total student number
2, one student can only get one of (2) or (3) or (4) each year.
Source: Ministry of Education, 2008

## 5.2 Covering the Students in Minban Higher Education Institutions

In Chinese official documents, Minban higher education institutions were categorized as “non-state” in contrast with the regular “state” higher education institutions (Ma, 2003). The

[5] The national study loan scheme was started in 1999 and was reformed in 2004 dramatically.

concept of Minban is different from that of private regarding to the way of organized, governed and financed. Most of the Chinese Minban institutions are financially supported only by the student payment of tuition fees and other costs instead of private donation. Some Minban universities are owned by local governments, but they do not get financial support same as public institutions from governments.

Since the first Minban university opened in Beijing in 1982, Minban higher education institutions developed fast in quantity but not quality. There were 1624 private higher education institutions in China until 2005 (Ministry of Education, 2008). But almost all of them are small and with low quality of education because of lacking high quality and enough investment. Only 547 Minban higher education institutions with 2.12 million students are authorized to provide degree education. And most of them are associate degree students, only small part of them are bachelor degree students and few master degree students.

International experiences show also that private institutions need to be included in national study loan project. Providing study loans to students in private higher education institutions has been exemplified by experiences of UK, US, Australia, New Zealand, Japan and Korea.

According to the relative regulation “Promotion Law of Minban Education of P.RC.”, the Minban higher education institutions are an important part of the education. Students in Minban higher education institutions have the same right to social supports and attending excellence competition as the students in public higher education institutions. But there is serious discrimination against Minban higher education institutions regarding student aid. There is much less opportunities of getting student aid for students in Minban higher education institutions.

The first student aid for students in Minban higher education was put forward in 2004. The new regulation on national study loan was set in 2004. This new regulation included students in Minban higher education for the first time. In 2007 with the issuing of new regulation “Plan on improving poverty student aid policy system in bachelor universities and senior and junior vocational schools”, the students in Minban institutions are listed as qualified applicants for all types of student aids. The financial aids for students in Minban institutions will hopefully reach a new level.

Compared with the students in public institutions, there are much more difficulties or challenges for the students in Minban institutions to get student aids. In the past three years, only about 30% of all Minban institutions were added into national study loan program. We can expect more difficulties for the students to get other types of student aids which are more limited than national study loan. There are some main barriers for the students in Minban institutions to get student aids:

Firstly, All the Minban institutions are owned or supervised by local governments. Local governments are responsible for establishing the procedures of operations and management for those universities. The national government can only issue principle policies. So the national government can not control the progress of the carrying out of student aids in Minban higher education institutions. And the situations of study loan projects are very different among different areas. Normally the local governments in rich areas and big cities are far more active to improve student aid systems than those in relatively poor areas and small cities.

Secondly, not all Minban higher education institutions can attend national student aid projects. Only those institutions which are operated according to related national regulations can attend study loan programs. Most of qualified Minban higher education institutions for study loans are the national authorized degree education institutions. But there are still much more Minban higher educations which have not meet the national requirements of an eligible higher education institution. In those more than 1600 institutions, there are only 547 intuitions are eligible according to national standards. The poverty students in those unqualified Minban higher education institutions can not be covered by student aid projects.

Thirdly, not all Minban higher education institutions want to attend national student aid projects. According to the national regulations, the institutions irrespective of public or Minban have to contribute 4%-6% [6]of the business income of institutions to student aid projects. All public higher education institutions would like to do that, but most of Minban higher education institutions don't want to do. If they contribute some to student aid projects, they will have less money for teaching and other costs. Business income is the only

[6] The ratio is 10% of tuition fees from 2004 until 2007. And it changed to 4-6% of total business income from 2007

funding source for Minban higher education institutions. They do not get any public subsidy from government.

Lastly, the tuition fees level varies greatly from one Minban institution to another. There are different regulations regarding how to calculate tuition fees in different local areas. Normally the tuition fees of Minban higher education should be the quasi prices of education. It is much related to the market, higher quality and higher demand, higher tuition fees. The student aid must take this into account. It makes the operation and management procedures more various and difficult to be carried out.

## 5.3 Increasing Study-abroad Student Aid Funding Source

Study-abroad student aid has already been established for more than 30 years, but the scale of it has almost not developed. Average 3000 persons were sent to study abroad by full student aid each year (see Table 9). The fiscal appropriation for study-abroad aid from 1996 to 2000 was RMB 1.5 billion, and it was RMB 2.2 billion from 2001 to 2006. It increased about 50% from RMB 1.5 to 2.2 billion. This increase was for the unit amount of student aid but not for number of aided students. The total fiscal appropriation is only about 5 billion RMB for study-abroad aid in total from the beginning to year 2003(Chen, 2004b). The stagnation of study-abroad student aid reflects the fiscal appropriation constraint. The constraint of fiscal appropriation to study-abroad student aid held up its development. There is an urgent need to find other funding sources other than fiscal appropriation t. In 2006 there was breakthrough of new models of funding sources. A combination of differential student aid models was established which included full aid by fiscal appropriation, cooperative aid by fiscal appropriation and local government or higher education institutions, international transport aid by fiscal appropriation, full aid by foreign scholarships and tuition fees exemption by foreign higher education institutions. Based on the multi models of study-abroad student aid, the number of public aided study-abroad students increased from 3,979 to 7000 in year 2006.

As stated before, students of study-abroad aid are expected to enhance research abilities at critical areas, help to build world-class universities and serve for the economy development of China. Chinese economy has been growing fast after year 1978. The average annual growth rate of GDP is average over 9% from year 1978 to 2006(National Bureau of

Statistics, 2008). But it is difficult for China to keep this trending without development strategies in face of challenges created by the knowledge and information revolution. Compared to OECD countries, Value-added of knowledge-based industries in China is still under-developed. China's strategy has to build solid foundations for a knowledge-based economy. Upgrading education and learning, improving the research and development system and exploiting global knowledge are urgent issues for China (Dahlman& Aubert, 2001).

**Table 9 Table Numbers of Students Aided by Study-abroad Aid**

| Year | Go out | Return | Year | Go out | Return |
|---|---|---|---|---|---|
| 1978 | 314 | - | 1993 | 2,938 | 2,278 |
| 1979 | 1,277 | - | 1994 | 2,071 | 2,196 |
| 1980 | 1,862 | - | 1995 | 2,154 | 2,160 |
| 1981 | 2,925 | - | 1996 | 1,905 | 1,845 |
| 1982 | 2,801 | - | 1997 | 2,110 | 1,990 |
| 1983 | 2,821 | - | 1998 | 2,639 | 1,964 |
| 1984 | 2,913 | - | 1999 | 2,661 | 2,558 |
| 1985 | 3,246 | - | 2000 | 2,808 | 2,456 |
| 1986 | 3,767 | 2,538 | 2001 | 3,495 | 2,528 |
| 1987 | 3,707 | 2,505 | 2002 | 3,500 | 2,456 |
| 1988 | 3,786 | 2,564 | 2003 | 3,002 | 2,638 |
| 1989 | 2,987 | 1,323 | 2004 | 3,524 | 2,761 |
| 1990 | 2,792 | 1,300 | 2005 | 3,979 | 3,008 |
| 1991 | 2,440 | 1,579 | 2006 | 7,000 | - |
| 1992 | 2,489 | 2,365 | 2007 | 10,000 | |

Source: Ministry of Education, 2008

Although we have made great progresses in Nami material, biology, medicine and telecoms fields, there are still big gaps between China and other developed countries in core technology of electronics, integrate circuit, information industries. China needs more competent human resources in those areas. Due to weak research ability in these areas, the fast way to shorten the distance is to learn from and cooperate with other developed countries and then make creation ourselves based on what have been learned. China need send more students to world famous universities or research institutes to enhance the research abilities of China and increase the opportunities of international cooperation. The strong demand determines that it is urgent to find more funding sources either by increasing fiscal appropriation or establishing other funding sources. With the tight budget for research and education in China, it is a big challenge for China to increase funding for study-abroad student aid.

## 5.4 Improving Brain Drain

The term brain drain was originally put forward in 1950s with original reference to the immigration from the United Kingdom to the United states (Pan *et al*, 2004) and it gained wide usage in the late 1960s when growth in the migration of skilled personnel from developing to developed countries accelerated (Commander, 2003). And now brain drain is common not only from developing countries to developed countries, but also from developed countries to developed countries. The characteristics and requirements for the 'brain' in the 'drain' have changed during development, but the trend and scales of the 'drain' are reinforced much more than before. In the new knowledge economy, the race between countries is to attract the best brains from around the world in order to maintain a competitive edge.

Brain drain from China deteriorates fast with the fast increasing of self-financed students after the establishment of open door policy in 1978. From year 1978 to year 2006, about 1.06 million students went abroad to study, but only about 0.275 million students have returned. It means that about 0.785 million persons still stay abroad (Chinese Association of Social Science, 2008). The returnee rate of study-abroad self-financed students is only average one forth. Based on the point of view of study-abroad of Chinese, there are mainly two reasons for the brain drain: self-motivation and international talent competition.

Firstly, there are many private goals and rationales of study-abroad, but in many cases, a rationale for participation in study-abroad is emigration. Although seldom discussed openly, this issue needs to be confronted by policy makers in government and academe in both developing and industrialized nations (Altbach& Teichler, 2001).

Secondly, there are more and more foreign scholarships and work permit in developed countries with the aim of attracting talented persons. More and more talented persons studying abroad are funded by foreign scholarships or stipend. About 80% students of high tech majors of Tsing Hua University and 76% of Peking University have gone to America. And 85% PhD students of science and engineering want to stay in America after graduation. Furthermore 48% PhD students in America have found jobs when they get the degree. Chinese government study-abroad student aid can not compete with those foreign scholarships, and then the quality of study-abroad students aided by Chinese government

decreases. How to cope with this competition constitutes another challenge of brain drain for study-abroad aid.

Currently the flow of international migration of highly skilled Chinese personnel is mainly oriented towards United States and Europe. Study-abroad has been the main form of migration of the skilled personnel. The migration is a vertical social mobility which mainly attributed to the gap between China and United States and Europe (Zhang, 2003). For those, who studied or are still studying in the United States and other foreign countries, various means have been sought to extend their stays or to seek permanent residency in the host countries (Pang & Appleton, 2004).

Student immigration into other countries by study-abroad is the main form of 'Brain drain' from China. There are two schools of thought regarding this phenomena: one school of thought holds that as a proportion of the total available reserve of scientific and technological human capital in China as a whole, the immigration of Chinese students to developed countries presents no cause for alarm; on the other hand, there are those who would argue that although the number may not be high compared to the total number of available human capital in China, they include the brightest talents and a large part of Chinese scientific and academic elites. Such outflow of migration therefore constitutes a major cause for concern and a serious risk to China's economic, social, technological and cultural development (Zhang, 2003).

To improve brain drain of self-financed students from China, China Scholarship Council established national excellent student scholarships for self-financed students who study abroad. This scholarship aims to attract excellent doctoral degree students to return to China or make contributions to China in other ways after graduation from study-abroad. From 2003 until 2007 there were about 1100 students who got this scholarship. The amount of scholarship is 5000 USD per student.  But the impacts of this scholarship on getting more students back to China are very limited.

Study abroad student aid aims to train human resources for the development of China, so all the students are supposed to come back after graduation. To ensure return, all students of study-abroad student aid are requested to sign a contract with China Scholarship Council. And the main content is that the students need to pay a deposit about 4000 Euro and provide two guarantees who promised to compensate 130% of the amount of aid to the government if

the students do not return and continue working for two years in China. This term is very efficient to get them return to China. According to China Scholarship Council statement, the returnee rate is over 97% until the end of year 2006. But there is one problem of how to get them make contribution to Chinese society and economy after they come back. There are still many barriers that hold up the contribution of returnees, such as weak research infrastructure and technology, complicated relationships and low private benefits. As research (Teichler&Jahr, 2001; Murphy-Lejeune, 2002) shows the persons with abroad experience tend to go abroad again more possibly. Most of the elite human resources end up in going abroad again to do research or make technical emigration to other countries after they have finished the compulsory two years service in China. In this sense, the study-abroad aid increases brain drain from China.

# 6. The Impacts of Student Aid Policy

Chinese higher education student aid has a long history. It has made great impacts on many aspects of China. Student aid is a kind of government investment in higher education for students. Benefits from investment of education include various individual benefits and social benefits.

Being assisted has many direct impacts on the students and their families. Firstly the student aid lessens the economic burden of students and their families. At the same time the students get the chances of higher education same as other students from high income families. Being assisted also has great impacts on the future of students. Students can get many private benefits which can be higher payment, job satisfaction and the enjoyment of leisure and various social benefits. According to human capital theory, it can be assumed that the poverty students can get higher income and job satisfaction after graduation. At the same time it also helps poverty students to upgrade social status of their families and their own in the future.

Social benefits are more various and are envisaged in many aspects. There are more types and amount of social benefits from student aid.

But measuring benefits from investment of education faces a series of intractable problems. Most of benefits are immeasurable, but that does not make them unreal (Barr, 1998: Psacharopoulos & Patrinos, 2002). Although the social benefits of student aid are difficult to be measured, the social benefits are easier to be detected than the private benefits. The impacts of student aid on China are clear to be noticed. This paper focus on the social benefits of student aid policy, namely the impacts of student aid policies on China

## 6.1 The Impacts on Other Aspects of Higher Education

### 6.1.1 The Equity of Higher Education

The equality of human being is the basic human right. Equity in different public areas is always the most important issues, no exception of higher education. China has set

'promoting education equity' as one basic national education policy. In 2006, the total amount of domestic-study student aid is about RMB17.4 billion and the amount of study loan was RMB 8 billion.

As stated in Chapter 4, equity in higher education is primarily focused on the equal opportunities to higher education. It implies that if individual A and B have similar tastes and ability, they should receive the same education irrespective of factors which are regarded as relevant, e.g. income (Barr, 1998). And the opportunity has two levels:

(1) the opportunity of having higher education irrespective of what types and level of higher education institutions (2) the opportunity of having a specific kind or level of higher education.

There are many factors that affect equity in higher education. Firstly the social economic background of the family affects it from two different aspects: expectations on higher education and affordability for higher education (Johnstone, 2005). It is believed that higher education is taken disproportionately by the children of the well-to-do not only because they have formed higher expectations for higher educations based on the experience of their parents and also because they have high affordability and they need not to earn money so early for their families. Higher education also affects own equity by charging high fees (i.e. the tuition fees and other living cost) from the students and unequal standard on entrance examinations[7]. Charging high fees from the students will worsen the disproportion of students of well-to-do and other poverty students.

For so many factors affect the equity of higher education, it is difficult and impossible to realize absolute equity by one way. Study aid policy is only one way to improve the equity status of higher education with regards to students' affordability and high level of fees for students. And some empirical research shows the impacts of student aid on the equity of higher education as shown in the following.

A Chinese research (Ding, 2006) analysed the changes of opportunities of higher education based on the survey data of urban families of year 1991 and 2000. It shows that the

[7] In China, universities set different standards and allocate numbers of enrolments among different provinces and cities. Normally the standards are lower and numbers of enrolments are bigger in big cities. It means the students in big cities have more chances of higher education than students in other areas.

opportunities of higher education among different income groups become more even with time. And the opportunities for higher education for low income group increased.

Another research (Li, 2006) made a survey on undergraduate students who started higher education in public higher from year 2000 to year 2003 in a university. Table 10 and Table 11 are adapted data from this research.

Table 10 shows that the percentage of students from income group (1) increased from 14.91％ of year 2000 to 22.11% of 2003. The percentage of students from income group (2) increased from 15.25％of year 2000 to 19.39% of 2003. The percentage of students from income group (3) decreased from 22.60％of year 2000 to 20.57％ of 2003. The percentage of students from income group (4) decreased from 26.34％of year 2000 to 20.57％ of 2003. The percentage of students from income group (5) decreased from 20.90％of year 2000 to 17.36％of 2003.

Table 11 shows that the percentage of students from countryside increased from 18.29%of year 2000 to 22.34％ of 2003. The percentage of students from big middle cities decreased from 42.04％ of year 2000 to 37.06％of 2003.

Both the two above-mentioned studies (Ding, 2006; Li, 2006) show that the opportunities of higher education for low income groups of students increased with the development of student aid in Chinese higher education. Due to big gap between low family incomes and high tuition fees and living expenses in cities of universities, it is impossible for the students from those low income families to study in universities without student aid policies. The increase of students from low income families indicates the improved equality of having higher education obtained by student aid policy.

**Table 10 Family Income Level of Undergraduate Students**

| Family income level | Year | Number of students | Percentage |
|---|---|---|---|
| (1)Lower than RMB 1250 | 2000 | 302 | 14.91% |
| | 2003 | 1767 | 22.11% |
| (2)RMB 1251-2667 | 2000 | 308 | 15.25% |
| | 2003 | 936 | 19.39% |
| (3)RMB 2668-5000 | 2000 | 457 | 22.60% |
| | 2003 | 993 | 20.57% |
| (4)RMB 5001-10000 | 2000 | 533 | 26.34% |
| | 2003 | 993 | 20.57% |
| (5)Higher than RMB 10000 | 2000 | 423 | 20.90% |
| | 2003 | 838 | 17.36% |

Source: Li, 2006.

**Table 11: Home Places of Undergraduate Students**

| Home place of students | Year | Number of students | Percentage |
|---|---|---|---|
| Countryside | 2000 | 370 | 18.29% |
| | 2003 | 1078 | 22.34% |
| County town | 2000 | 703 | 39.67% |
| | 2003 | 1959 | 30.60% |
| Big Middle city | 2000 | 950 | 42.04% |
| | 2003 | 1788 | 37.06% |

Source: Li, 2006.

But the research (Li, 2006) and another research (Liu&Yu&Li, 2006) show that the second level of opportunity of higher education is very unequal among different income groups. It is shown that the percentage of students from farmer families is still very low at high quality Chinese higher education and it becomes smaller with the increase of higher education quality. It is thought that student aid policies are not so helpful to improve second level equality as it does to first level equality of higher education. In Chinese higher education, higher quality universities charge less tuition fees than lower quality universities, at the same time students in more prestigious universities can get higher student aid than that in lower quality universities. In general, higher quality universities can get more fiscal appropriation and specific project funding, for example, the 985 project and 211 projects (Li, 2006). The under representation in prestigious universities of students from low income families is not resulted by the short term economic shortage. It is thought that it is resulted by the lower learning ability of students from low income families. The long time poor environment of growing up resulted into the lower learning abilities in those families (Li, 2006).

### 6.1.2 The Quality of Higher Education

As stated in Chapter 4, one important goal of study-abroad student aid is to train excellent human resource for building high quality universities of China. Many young teachers and researchers have been sent abroad to study. After they come back, they have become the elite group of academy and management of Chinese higher education and made great contribution to improving its quality. About 80% of the higher education rectors, 81% of members of China Academy of Science, 54% of members of China Academy of Engineering and about two thirds of supervisors of doctoral degree have the experience of studying abroad (XATU, 2008). Another survey shows that 51% of institutional level leaders and 35% of faculty level leaders have the experiences of study-abroad. Firstly, they have upgraded the theory, practice and research methods of almost all the subjects and majors in Chinese higher education. Secondly, they have created new subjects that did not exist before and imported new teaching materials and research methods from foreign higher education institutions. They have innovated Chinese academy more internationalized and enhanced the world competitiveness of Chinese higher education. The abilities of English language and other professional knowledge of many young teachers and professors have been improved through study-abroad. Furthermore, from the year 2006 to the year 2011, 5000 graduates will be sent abroad to study in world famous universities or research institutes every year. This project will also enhance the research ability of Chinese higher education.

But there is need to mention that there are many factors that restrict the impacts of study-abroad on improving the quality of Chinese higher education. For example, the troublesome application procedures and many qualification restrictions of the study-abroad aid make many talented higher education staff and students seek other opportunities to study abroad, such as the foreign scholarships and institutional cooperation with foreign higher educations. Study-abroad student aid is not the first choice for most talented teachers and students.

Moreover, the domestic-study student aid with the aim to reward excellent students also has impacts on the quality of higher education. This reward encourages students to work hard and compete for the limited number of scholarships. The impact of rewarding scholarships on the quality of study is supposed to be particular high for poverty students. The number of student aid can still not meet the demand. It means some students can not get aid although

they need them. Competing for excellent student scholarships could be the hope of some poor students.

## 6.2 The Impacts on National Development

That Education must serve socialist construction, and socialist construction must rely on education was put forward by the ‘Decision of National congress of the Communist Party of China on the Reform of the Education System’ issued in 1985.

Chinese higher education must be geared to the needs of the accelerated reform and the modernization drive. New approaches should be explored to enlarge the scale of higher education, to further rationalize its structure, and to improve quality and efficiency. This was put forward by ‘the Outline for the Reform and Development of Chinese Education’ issued in 1993.

The relation between Chinese national development and education were explained clearly in both above documents. Based on those documents, the most important goals of education is to serve for national developments. And all efforts made for higher education are centred on better serving national social and economic developments, so does developing both domestic-study and study-abroad student aid, as stated in Chapter 4.

### 6.2.1 Social Equity

Domestic-study student aid has made impacts on the social equality through getting better equity in higher education. The gap between incomes of urban and rural area families has a long history in China. The per capita disposable income of urban citizen is many times more than that of rural citizens. Going to universities and finding a good job after graduation has been almost the only way for the children of rural areas to desert rural areas and further lessen the poverty of their families. But the high tuition fees of universities and high living expenses in cities make it harder for poverty students to obtain higher education. It is the student aid that helps them to get as equal education as others. As research (Liu &Yu &Li, 2006) shows, education equity is a more important cause for social equity than social equity for educational equity. It means that education equality can have greater impacts on social equity than that of social equity on education equity.

### 6.2.2 Balance of Economy Development

Both domestic-study and study-abroad student aid have made impacts on improving the uneven economic developments between western and eastern areas, urban and rural areas by training more human resources for under developed areas such as rural areas and western areas. Both student aids have special projects on western and rural areas developments. And research shows that benefits of education are much higher in the undeveloped area than that in developed areas (PsacharopoulosPatrinos, 2002). Until the end of the year 2006, study-abroad student aid has trained more than 2000 persons for western areas. From year 2000, there have already been more than 20,000 domestic higher education students going to work in western areas. Student aid has contributed much to improve the uneven economic developments of China.

### 6.2.3 Creativity of Science and Technology

Study-abroad student aid has made impacts on the development of critical high tech industries through enhancing the creativity of science and technology of China. Due to vertical economic gap between China and developed countries, China is still far behind them in high tech industries and creation abilities of science and technology. But the advantages over high tech industries and creativity are the engine of economy developments in modern eras. Modernization theory shows that underdeveloped countries can learn some science and technology useful for their own developments from developed countries. Study-abroad student aid made international study possible. And it has shown great impacts on the development of science and technology of China.

Firstly, study-abroad student aid helps to train a group of science and technology research elites and project leaders with international level academic abilities. They enhanced the research abilities of science and technology and developed Chinese own world level advantages in some critical areas. Secondly, there are economic benefits from study-abroad in through increasing science and technology creation. The ratio of aid amount to the economic benefits from it is 1:10. And the average economic profit per returnees is 1.44 million RMB. There are more than 4000 high tech companies started by returnees from study-abroad (PKU&SYSU, 2006).

### 6.2.4 Internationalization

Internationalization includes specific policies and programmes to cope with or exploit globalization undertaken by governments, academic systems and institutions, and even individual departments or institutions. Internationalization describes the voluntary and perhaps creative ways of coping. With much room for initiatives, institutions and governments can choose the ways in which they deal with the new environment. Internationalization accommodates a significant degree of autonomy and initiative (Altbach, 2004). Internationalization of higher education is seen as one of the ways a country responds to the impact of globalization (Qiang, 2003).

Study-abroad is an important model of internationalization of higher education. The study-abroad student aid has made great contribution to the internationalization of China. Firstly the study-abroad promotes the mutual understanding between Chinese and foreigners. Foreigners can be misled by some media regarding China. The study-abroad is a good way to let the world know more about China. Secondly study-abroad aid helps to establish relations and cooperation between China and foreign countries regarding academy and research. About 77.3% of returnees believe that their study-abroad experiences have great impacts on the international cooperation and communication at their own institutions or departments. (Chinese Association of Social Science, 2008)

# 7. Conclusion

## 7.1 Findings

Student aid policy becomes more important than ever with the cost sharing policies development. In the unique circumstances of China characterized with a polarized economy, the imbalanced development between urban and rural areas and between east and west, student aid police appears much more important than in developed countries. China has been making efforts to improve the student aid policy since 1978. But Student aid policies have not been fully developed to realize their expected rationales and goals. While it has great impacts on Chinese economy and higher education, there are still some challenges to overcome.

This study is mainly a macro policy analysis of two types of student aids in Chinese higher education. Firstly, it explores the background in which the policy is formulated and finds out the policy development stages. Secondly, human capital theory and modernization theory are applied to rationale the policy and specific goals of the policy are identified. Thirdly, some challenges confronting the policy are analyzed. Finally the impacts of the policies are explored.

Domestic-study student aid and study-abroad student aid are two complementary parts of Chinese student aid policies. Both of them have made great progresses in the past 30 years. They will continue growing fast in the future according to the national economy development strategy.

Assisting poverty students to improve equality and training human capital to increase efficiency are two rationales for Chinese student aid policy.Domestic-study student aid policy emphasizes on equity and study-abroad student aid policy emphasizes on efficiency. Although both equity and efficiency are important for Chinese society and economy, the government prioritizes domestic-study aid. Firstly, there is explicit central government appropriation plan for domestic-study student aid, but there is not this kind of plan for study-abroad student aid. Secondly, the total amount of domestic-study student aid is far more than that of study-abroad student aid.

Based on the two rationales, many specific goals of Chinese student aid policy are identified. The two types of student aid have some similar goals such as to serve for the national economy development, to balance the developments of rural and urban areas, and to balance the developments of eastern and western areas. At the same time they have respective special goals. To improve equality of student is an important special goal of domestic-study student aid. On the other hand, to improve the quality of Chinese higher education and science and technology creativity are important special goals of study-abroad student aid.

The student aid policy still has some challenges to overcome to fulfil its goals as expected. Some of them are long term and common challenges all over the world, such as funding sources constraints, the gap between funding amount and cost for higher education and vertical brain drain. But some of them are short term and special challenges in China. Minban higher education institutions are very special and are different from private institutions in other countries. Minban higher education is a dilemma for Chinese government. The number of institutions is big, but most Minban institutions are not approved by the government. Students in the unapproved institutions have no right to get student aid. Secondly, study loan should be the most important way and the easiest way to get student aid according to international experience. But it is a different case in China. The main problem is how to coordinating the three stakeholders of bank, higher education institution and student the process from application and recovery of loans. The loaning banks have low motivation to give loans because of low profits and high risk of recovery. The higher education institutions have low motivations to cooperate with the banks during the recovery stage. And some students will not pay back loans either because they can not afford it or they are not willing to pay it back. It is difficult to track the students if they intend not to do that because of poor personal information management in China. The two specific challenges reflect the structural problems of Chinese higher education and the personal credit management problem in China. To overcome the two challenges, the Chinese government need to reform the Minban higher education institutions and establish personal credit information system at least for the students who have applied study loan.

## 7.2 Further Research

Content analysis is the most important research method in this study. A theoretical analysis is made to explore the rationales and goals of the policy. Secondary data analysis is also an important research method. It provides data support in this study.

One limit of secondary analysis is absence of key variables. It means that some key variables data can not be found in secondary data and it is difficult to do multivariate analysis (Bryman, 2004) to understand the impacts of the policy better. Secondly some secondary data are not updated enough. A case study of a Chinese university could be used to supplement the limits of secondary data analysis in this paper.

It would be also interesting to conduct studies on the advantages and disadvantages of present student aid policy from the point of view of students. It would be useful for the government to improve the student aid policy.

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